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U. S. NAVAL TECHNICAL MISSION TO JAPAN
CARE OF FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

27 December 1945

RESTRICTED

From: Chief, Naval Technical Mission to Japan.
To : Chief of Naval Operations.

Subject: Target Report - Japanese Land-Based Radar.

Reference: (a)"Intelligence Targets Japan" (DNI) of 4 Sept. 1945.

1. Subject report, covering Target E-03 of Fascicle E-1 of reference (a), is submitted herewith.

2. The investigation of the target and the target report were accomplished by Lieut. W. G. Lamb, USNR, assisted by Lieut. E. E. Schwalm, USNR, and Lt.(jg) S. H. Kadish, USNR, as interpreter and translator.



C. G. GRIMES
Captain, USN

32409

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E-03

JAPANESE LAND-BASED RADAR

"INTELLIGENCE TARGETS JAPAN" (DNI) OF 4 SEPT. 1945

FASCICLE E-1, TARGET E-03

DECEMBER 1945

U.S. NAVAL TECHNICAL MISSION TO JAPAN

SUMMARY

ELECTRONICS TARGETS

JAPANESE LAND-BASED RADAR

Japanese land-based radar is discussed in general, and a brief description of each of the more important equipments is given. Enclosures (C) to (J) are diagrams of selected sets that can be considered typical.

As shown in Enclosure (K), "Summary of Land-Based Radar," the development of the first Japanese radar was completed late in 1942. The search-light control radar was undoubtedly based on captured British equipment and the AA fire control models were designed from captured American sets. It was stated that although no equipments were direct copies of German designs, valuable assistance and suggestions were obtained from German technical personnel.

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INTRODUCTION

This report covers Japanese land-based radar in use at the end of the war. Experimental and developmental equipments are described in NavTech Jap Report, "Japanese Experimental Radar", Index No. E-12.

The information and conclusions are based upon interrogation of Japanese naval and technical personnel and the inspection of equipment, installations, and experimental facilities.

REFERENCES

Location of Target:

Navy Yard, SASEBO.

Anti-aircraft installations on the islands of KYUSHU and HONSHU.

Navy Yard, YOKOSUKA.

Second Naval Technical Institute, KANAZAWA.

Second Naval Technical Institute, Meguro Branch, TOKYO.

Naval Fighter Director Station, CHIGASAKI.

Naval Radar School (Aircraft), FUJISAWA.

Japanese Personnel Interviewed:

As listed in Enclosure (A).

THE REPORT

Part I - GENERAL

Japanese land-based naval radar can be divided into five groups:

- a. AA Early Warning 2 to 6 meters.
- b. Surface Warning 10cm.
- c. Searchlight Control 1.5 meters.
- d. AA Fire Control 58cm to 1.5 meters.
- e. Direction of Friendly Craft 60cm to 2 meters.

All of these radars followed a definite design pattern; the equipments consisted of separate units, usually performing the following functions:

Synchronizer (often combined with Range Unit)
Indicator
Range Unit
Receiver
Modulator
Transmitter
Antenna
Lobe Switcher (when required)
Power Supplies and Voltage Regulators.

Most of these equipments operated on a fixed pulse repetition rate controlled by a low frequency oscillator in the synchronizer unit. This oscillator also acted as a time base for the range measuring circuits and its frequency was determined by a tuning fork, crystal, or high Q LC circuit. Conventional wave forming circuits were used in the indicators to produce linear, logarithmic, and sinusoidal sweeps. The technique of data presentation was not developed to a very high degree. "A" scans were used for search and range indication. Where better accuracy of range measurement was desired, an expanded sinusoidal sweep was employed. Pip matching was used for bearing and elevation indication in systems with lobing antennae; maximum echo determined bearing in systems without lobe switching. In conical scan systems, bearing and elevation were indicated by a variation of the moving spot type indicator. A pattern appeared on the cathode ray tube to indicate an error in bearing or elevation, and when this error had been corrected, the pattern closed down to a single spot centered on the tube face. No "B" scans or PPI indications were used on land-based naval radar. Range marks were applied to the "A" sweeps either as equally spaced pips or as a single movable mark. Inductive phase shifters operating from the synchronizing oscillator provided the time delay circuits for the range units where movable range marks were used.

The receivers were of conventional design with double or single IF sections. Intermediate frequencies in use ranged from 200 kc to 21.5 mc. In general, the band width was equal to the reciprocal of the pulse length. This would give band widths of from 50 kc to 400 kc.

Grid modulated transmitters were generally preferred in view of the low modulator output required and the ease of synchronizing. The oscillators were of from one to four tubes tuned by parallel lines or LC circuits, or magnetrons for micro-wave equipments.

Antenna design showed no advanced techniques. This was at least partially due to the indication systems employed, as none of them called for narrow beam widths or rapid scanning antennae. YAGI arrays were very popular, especially

where weight and ease of assembly were factors of importance. Large bedspring arrays were used for important long-wave early warning radars. Separate antennae for transmitting and receiving were used by most of these equipments although recent designs and experimental equipments showed a marked trend toward the use of a single antenna and duplexing system. Lobing was accomplished either by contact, capacity, or inductive switching, with contact switching being preferred especially where only the receiving antenna was lobed.

Direction of friendly craft, air and surface, was in a state of development at the end of the war and is treated in NavTechJap Report, "Japanese Experimental Radar," Index No. E-12. There were two methods in use: a 1.5 to 2 meter radar that operated in conjunction with the M-13 IFF, and a 60cm conical scan radar.

One of the outstanding features of Japanese radar equipment was the avoidance of designs that required precision work in production; this was especially true of the antennae. Simplicity of design not only made it possible to produce the equipment with untrained labor but also facilitated repairs in the field. It is doubtful, however, that this would have been possible had more advanced techniques been developed. Although the Japanese were theoretically qualified to produce modern radar equipment, production difficulties, lack of adequate test equipment, and the absence of creative imagination resulted in models that compare with American equipment of 1942.

A short description of each of the more important land-based radar equipments follows.

Part II - AA EARLY WARNING RADAR

A. Mark 3 (RD), AA Early Warning Radar

Wavelength 5 meters
 Peak Power Output 500 Watts
 Wave Continuous
 Oscillator Crystal Controlled
 Amplifier RF Power

The development of this radar was completed late in 1942. A few installations were made but the operation was generally unsuccessful and the project was abandoned.

B. Mark 1, Model 4 (14). (See Enclosure C)

Wavelength 6 meters
 Peak Power Output 100 kw
 Pulse Length 20 micro seconds
 Pulse Repetition Rate 250 cps.
 Oscillator Push-Pull, back coupled, parallel wire tuned.
 Antenna Single, for transmitting and receiving.

This is the most modern of the long wave AA early warning radars, the development having been completed in June 1945. The antenna is a large structure 6 meters wide, 7 meters high, and 4.7 meters deep. It is composed of four, two-element, half-wave Yagis with a similar array of full wavelength behind it acting as a parasitic reflector. The scope presentation was of the "A" type, maximum echo being used for bearing determination.

C. Type 2, Mark 1, Model 1, Modifications 0, 1, 2, and 3 (11, 11-1, 11-2, and 11-3). (See Enclosure D)

Wavelength 3 meters
 Peak Power Output 5 kw
 Modification 0

Modification 1	5 kw
Modification 2	40 kw
Modification 3	40 kw
Pulse Length	20 micro seconds
Pulse Repetition Rate	
Modification 0	1000 cps
Modification 1	1000 cps
Modification 2	500 cps
Modification 3	500 cps

This is one of the most widely used AA early warning radars; an early model was known as the Guadalcanal Type. The first of these was completed early in 1942 and minor modifications in design were made shortly thereafter. A major redesign was completed about the middle of 1943 and was designated "Modification 2." This redesigned equipment was more ruggedly constructed and had considerably more power output. Modification 3 is similar to Modification 2, but has a few minor improvements. The appearances of the 11, 11-1, 11-2, and 11-3 were similar, being a pair of antennae on a large screen, 8 meters by 5½ meters, mounted along with the control room on a rotating structure. An "A" type presentation is used with maximum echo for bearing indication.

D. 11-3-Kai (See Enclosure D)

Wavelength	3 meters
Peak Power Output	40 kw
Pulse Length	20 micro seconds
Pulse Repetition Rate	500 cps
Antenna	Single, for transmitting and receiving

This radar was a redesign of the Type 2, Mark 1, Model 1 series and although completed in June 1945, it was not yet in use. Although a single antenna was used for transmitting and receiving, lobing in the horizontal plane was employed only while receiving. The accuracy in bearing was stated to be plus or minus 1°. It was further stated that the single lobe (when transmitting) allowed better frequency stability and also that some difficulty was experienced in building a high power lobe switcher. This equipment is similar in appearance to the 11 series, the antenna and control room being mounted on a rotating structure. Three indicators were used: "A" scan for warning, pip matching for bearing, and an expanded sinusoidal scan for range.

E. Type 3, Mark 1, Model 1 (11-K). (See Enclosure E)

Wavelength	2 meters
Peak Power Output	10 kw
Pulse Length	20 micro seconds
Pulse Repetition Rate	500 cps
Antenna	Single, for transmitting and receiving.

This was a medium size AA early warning radar designed for shore installations. The antenna was composed of an array, 5 dipoles high and 4 wide, on a rotating structure. The control room and units of the equipment are usually installed underground adjacent to the antenna. "A" type indication is used with maximum echo indication for bearing.

F. Type 3, Mark 1, Model 3 (13). (See Enclosure F)

Wavelength	2 meters
Peak Power Output	10 kw
Pulse Length	10 micro seconds
Pulse Repetition Rate	500 cps
Antenna	Single, for transmitting and receiving.

This is one of the more Popular AA warning radars, being light weight and

easily installed. An "A" type indicator was used with maximum echo indication for bearing. Although the design of this radar was completed in October 1943, a considerable quantity was found in storage and installed on land and on shipboard.

G. Type 2, Mark 1, Model 2, Modifications 0, 2, and 3. (See Enclosure G)

Wavelength 2 meters (modification 0 - 1.5 meters)
 Peak Power Output 5 kw
 Pulse Length 10 micro seconds
 Pulse Repetition Rate 1000 cps (modification 3 - 500 cps)
 Antennae Separate, for transmitting and receiving

This is a light weight, low power, mobile equipment. Modification 2 employed a duplexing system to allow the use of a single antenna for transmitting and receiving, but this was evidently unsatisfactory as recent drawings have been revised to show two separate antennae. This equipment was very similar to and uses a number of units common to the Type 2, Mark 2, model 1, a shipboard radar. "A" type indication and maximum echo for bearing is used.

H. Mark 6, Model 3 (63)

Wavelength 3 meters
 Peak Power Output 40 kw
 Pulse Length 20 micro seconds
 Pulse Repetition Rate 416.7 cps
 Antenna Single, for transmitting and receiving.

An experimental radar with broad band antenna. This radar is described in NavTechJap Report, "Japanese Experimental Radars," Index No. E-12.

Part III - SURFACE SEARCH RADARS
(HARBOR AND SHORE PROTECTION)

These radars were designed primarily as shipboard equipments. The basic characteristics are listed here for reference; a more detailed description will be found in NavTechJap Reports "Japanese Submarine and Shipboard Radars", Index No. E-01, and "Japanese Experimental Radar", Index No. E-12.

Mark 2, Model 2 Modifications 1, 2, 3, and 4 (22-kai 1, 2, 3, 4)

Mark 3, Model 1 (220)

Mark 3, Model 2 (32 or 10582)

Wavelength 10 cm
 Peak Power Output 2 kw (22-kai 1-500w)
 Pulse Length 10 micro seconds
 Pulse Repetition Rate 2500 cps (22-kai 3-600 cps)

Part IV - SEARCHLIGHT CONTROL RADAR

Mark 4, Model 3 Modifications 0, 1, and 2 (L₁, L₂, L₃) (See Enclosure G)

Wavelength 1.5 meters
 Peak Power Output
 L₁ 7 kw
 L₂ 10 kw
 L₃ 13 kw
 Pulse Length
 L₁ 4 micro seconds
 L₂ 3 micro seconds
 L₃ 3 micro seconds

Pulse Repetition Rate 1000 cps
 Antenna Separate, for transmitting and receiving

The transmitting antenna and the bearing and elevation indicator were mounted on a searchlight controller. The receiving antenna, composed of four Yagis, lobeswitcher, transmitter, and transmitter power supply, are mounted on the searchlight which is servo-operated from the controller. The other units were usually installed underground nearby. The later models of this equipment employed an "A" scope for search, an expanded "A" sweep for range, and an indicator similar to the moving spot scope for bearing and elevation. It was stated that accuracies of plus or minus 1.5° were obtained in bearing and elevation. This equipment was probably copied from an early British design.

Part V - AA FIRE CONTROL RADAR

A. Mark 4, Model 1 (S3). (See Enclosur

Mark 4, Model 2 (S24). (See Enclosu)

Wavelength	1.5 meters
Peak Power Output	13 kw
Pulse Length	3 micro seconds
Pulse Repetition Rate	1000 cps
Antennae	separate

These two radars were quite similar, the S3 had three antennae; one for transmitting and one for the receiving antennae. Accuracies of plus or minus 1° can be expected in both bearing and elevation. An "A" scope was used for range and search, and pip matching was used for bearing and elevation.

difference being in the antennae. S3 has one for elevation, and one for bearing. The S24 has two antennae, one for elevation, and one for bearing. Lobing is employed on S3 for range and search, and pip matching was used for bearing and elevation.

B. S8A

Wavelength	58 cm
Peak Power Output	6 kw
Pulse Width	2.5 micro seconds
Pulse Repetition Rate	3750 cps

S8B (Mark 6, model 1)

Wavelength	60 cm
Peak Power Output	10 kw
Pulse Width	2.5 micro seconds
Pulse Repetition Rate	1000 cps

These two radars are experimental conical scan equipments and are treated in detail under NavTechJap Report, "Japanese Experimental Radars," Index No. E-12.

Part VI - RADAR FOR DIRECTION OF FRIENDLY CRAFT

A. Mark 6, Model 2 (62)

Wavelength	2 meters
Peak Power Output	10 kw
Pulse Length	10 micro seconds
Pulse Repetition Rate	500 cps
Antenna	single

B. TH

Wavelength 1.5 meters
Peak Power Output 13 kw
Pulse Length 6 micro seconds
Pulse Repetition Rate 1000 cps
Antenna single

These two radars were used in conjunction with the M-13 IFF for direction of friendly craft. A broad band antenna was used to allow reception on a slightly different frequency from that of transmission. These radars are described in NavTechJap Report, "Japanese Experimental Radars," Index No. E-12.

ENCLOSURE (A)

LIST OF PERSONNEL INTERVIEWED

* * * * *

I.U. - Imperial University
 E.E.S. - Electric Engineering Section
 C.E.S. - Chemical Engineering Section
 S.S. - Science Section

* * * * *

<u>Name</u>	<u>School and Year of Graduation</u>	<u>Specialties</u>
Vice Adm. T. NAWA	Tokyo I.U.(E.E.S.)1917 Studied Chemistry in Tokyo I.U.(S.S.)1919-1922	Chief of the Radar and Communication Department.
Capt. N. TAKAHARA	Naval Academy 1919 Tohoku I.U.(E.E.S.)1932	Head of Fourth Section (radar inter- ceptor, radio beacons & dir. find.)
Capt. & Dr. Y. ITO	Tokyo I.U.(E.E.S.)1924 Technische Hochschule Dresden, Germany 1927	Head of First & Sec- ond Section (Funda- mental researches)
Capt. (Tech) Y. YAJIMA	Tohoku I.U.(E.E.S.)1924	Secretary to T. NAWA Head of Production Section.
Capt. I. ARISAKA	Naval Academy 1923 Tohoku I.U.(E.E.S.)1934	Head of Third Section of Communication Dept. (Radio equip.)
Capt. K. NAGAI	Naval Academy 1924	Member of Adminis- tration Dept.
Lt. Comdr. (Tech) T. HYODO	Tokyo I.U.(C.E.S.)1936	Researcher on Mater- ials and Components for High Frequency Use.
Lt. Comdr. (Tech) S. KATSURAI	Tokyo I.U.(E.E.S.)1936	Researcher on Land and Airborne Radars (Type 51, 61, 63).
Lt. Comdr. (Tech) S. MORI	Tokyo I.U.(E.E.S.)1937	Researcher on ship- borne radar (cm. wave; viz. 22)
Lt. Comdr. (Tech) H. TSUJITA	Kyoto I.U.(S.S.Physics) 1936	Researcher on air- borne radar (meter wave, i.e. FY-3, FH-1, FK-4, H-6).
Lt. Comdr. K. KAMIYA	Tohoku I.U.(E.E.S.)1936	Researcher on com- ponents and tubes for high frequency.

ENCLOSURE (A), continued

<u>Name</u>	<u>School and Year of Graduation</u>	<u>Specialties</u>
Lt. Comdr. (Tech) O. OKAMURA	Tokyo I.U.(E.E.S) 1940	Researcher on tubes for cm. wave.
Lt. Comdr. S. MATSUI	Naval Academy 1934 Osaka I.U.(S.S.Physics) 1942	Head of Research in Yokosuka Branch (research on installation of ship-borne and land based radio and radar).
Lt. Comdr. (Tech) W. SUGIYAMA	Waseda University(E.E.S.) 1940	Researcher on high frequency cable in Yokosuka Br.
Lt. (Tech) K. OGATA	Tohoku I.U.(E.E.S.)1941	Researcher on land based radar (cm. wave; viz. 61)
Lt. (Tech) S. KAWAZU	Tokyo I.U.(E.E.S.)1941	Researcher on land based radar (meter wave i.e. 14,62).
Lt. (Tech) S. YAMANE	Kyoto I.U.(E.E.S.)1942	Researcher on airborne radar, counter measures.
Lt. K. MORI	Naval Academy 1940	Teacher in Radar Training School.
Dr. K. TAKAYANAGI	Kuramae Tech. College 1921	Consultant to T. NAWA, Head of Third Section (Radar)
Eng. H. SHINKAWA	Waseda University 1933 (E.E.S.)	Researcher on radars (meter wave i.e. L-2, L-3, S-3, S-24, N-6, M-13)
Eng. M. HACHIYAMA	Tokyo I.U.(S.S.Physics) 1933	Researcher on high frequency circuits for cm. wave.
Eng. S. SUZUKI	Tokyo Physical School 1929	Researcher on airborne (meter wave N-6) radar.
Eng. K. UEMINAMI	Washington University U.S.A. 1934	Researcher on airborne radar interceptor and shipborne direction finder.
Mr. B. KIMURA	Waseda University 1930	Consultant to H. TAKAHARA (researcher of radio freq. instruments in Electro Technical Laboratory of Japanese Government).

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ENCLOSURE (A), continued

<u>Name</u>	<u>School and Year of Graduation</u>	<u>Specialties</u>
Mr. S. NISHIYAMA	Uta University 1932	Interpreter (had no relation to Second Nav. Tech. Inst. up to the end of the war; belongs to Electro. Tech. Lab. of Japanese Government)

ENCLOSURE (B)

LIST OF DOCUMENTS FORWARDED TO WDC THROUGH ATIS

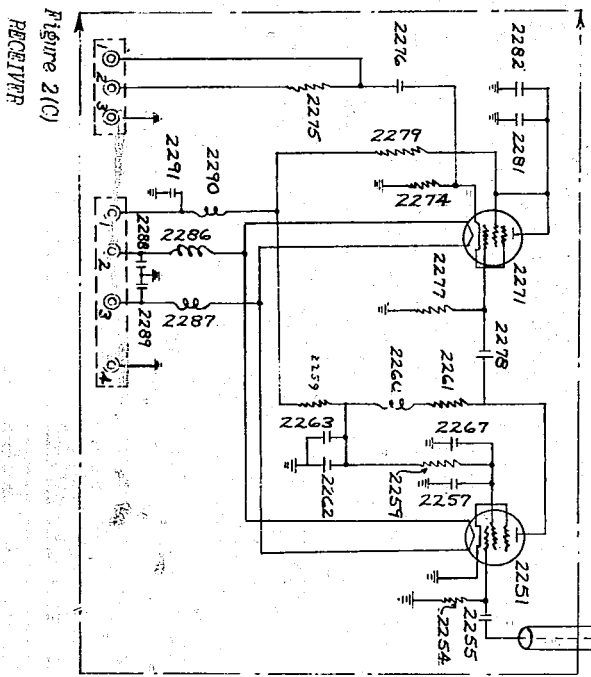
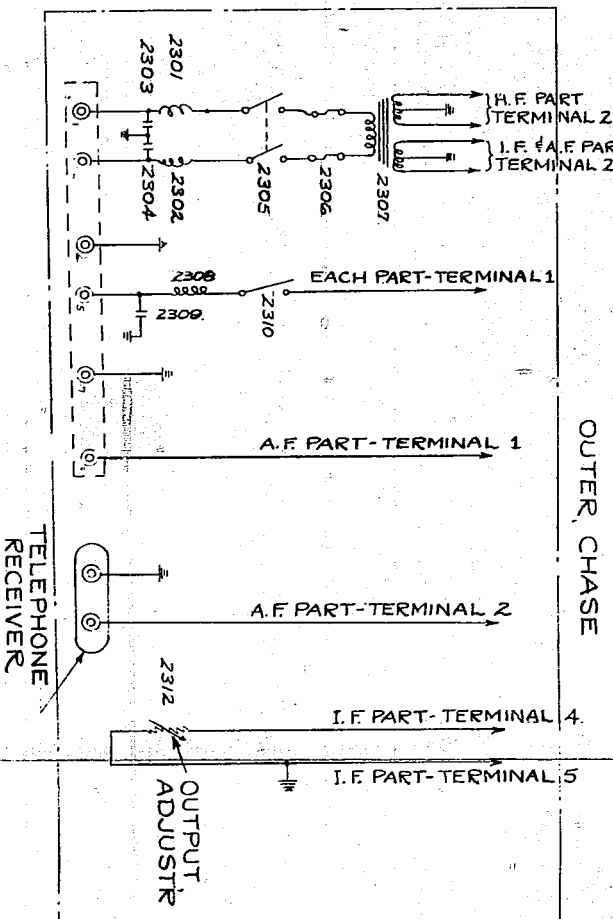
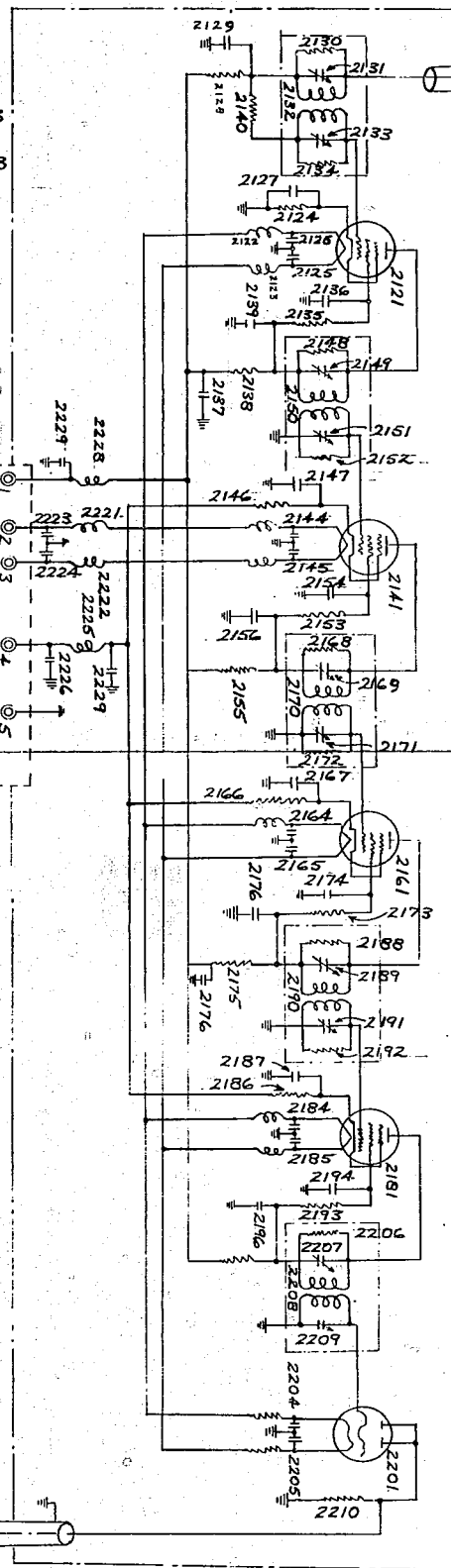
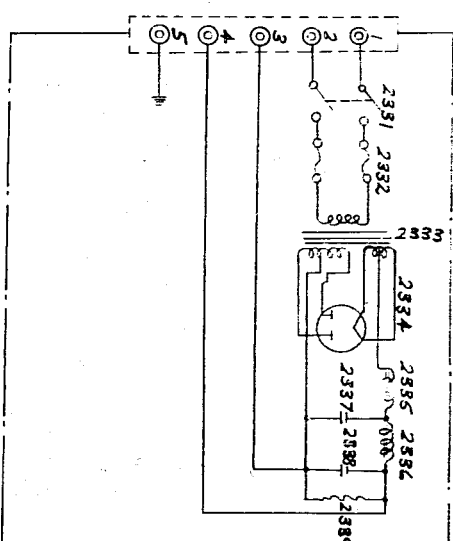
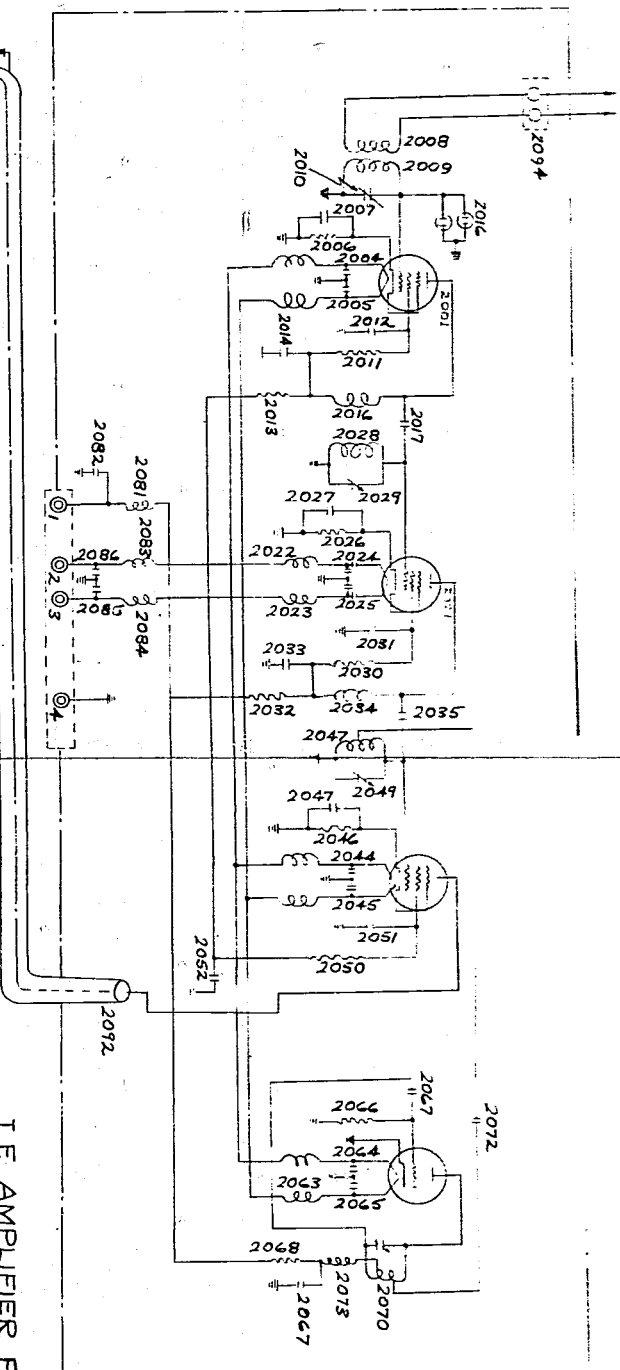
<u>NavTechJap No.</u>	<u>ATIS No.</u>	<u>Title</u>
ND21-6073	3328	Instruction Book, Temp. Desig. Mark 1 Radar
6074	3329	Modification and Repair, Temp. Desig. Mark 1 Radar
6075	3330	Instruction Book, Temp. Desig. Type 3, Mark 1, Model 1 Radar
6076	3331	Installation Reports, Temp. Desig. Mark 1, Model 1 Radar
6077	3332	Installation Instructions, Temp. Desig. Mark 1, Model 1 Radar
6079	3334	Installation Modifications, Temp. Desig. Type 3, Mark 1, Model 1 Radar
6080	3335	Instruction Book for Transmitter, Receiver and Indicator for Temp. Desig. Type 3, Mark 1, Model 1 Radar
6081	3336	Installation Instructions, Temp. Desig. Mark 1, Model 2 Radar
6082	3337	Modification Reports, Type 2, Mark 1, Model 2, Modification 2 Radar
6083	3338	Modification Reports, Type 2, Mark 1, Model 2 Antenna
6084	3339	Operating Instructions, Temp. Desig. Mark 1, Model 2 and Mark 2, Model 1 Radars
6085	3340	Instruction Book for KO(A) Model 1 Indicator used with Type 3, Mark 1, Model 3 Radar
6087	3342	Instruction Book, Type 3, Mark 1, Model 3 Land-Based Radar
6088	3343	Installation and Maintenance, Temp. Desig. Mark 1, Model 4 Radar
6089	3344	Instruction Book Antenna Switching Device used with Temp. Desig. Type 3, Mark 2, Model 1 Radar
6090	3345	Antenna Coupling Device used with Type 2, Mark 2, Model 1 Radar
6092	3347	Instruction Book for Receiver used with Temp. Desig. Type 3, Mark 3, Model 1 Radar
6093	3371	Instruction Book, Temp. Desig. Mark 2, Model 2 Radar
6095	3349	Operating Instructions, Mark 2, Model 2, Modification 2 Radar

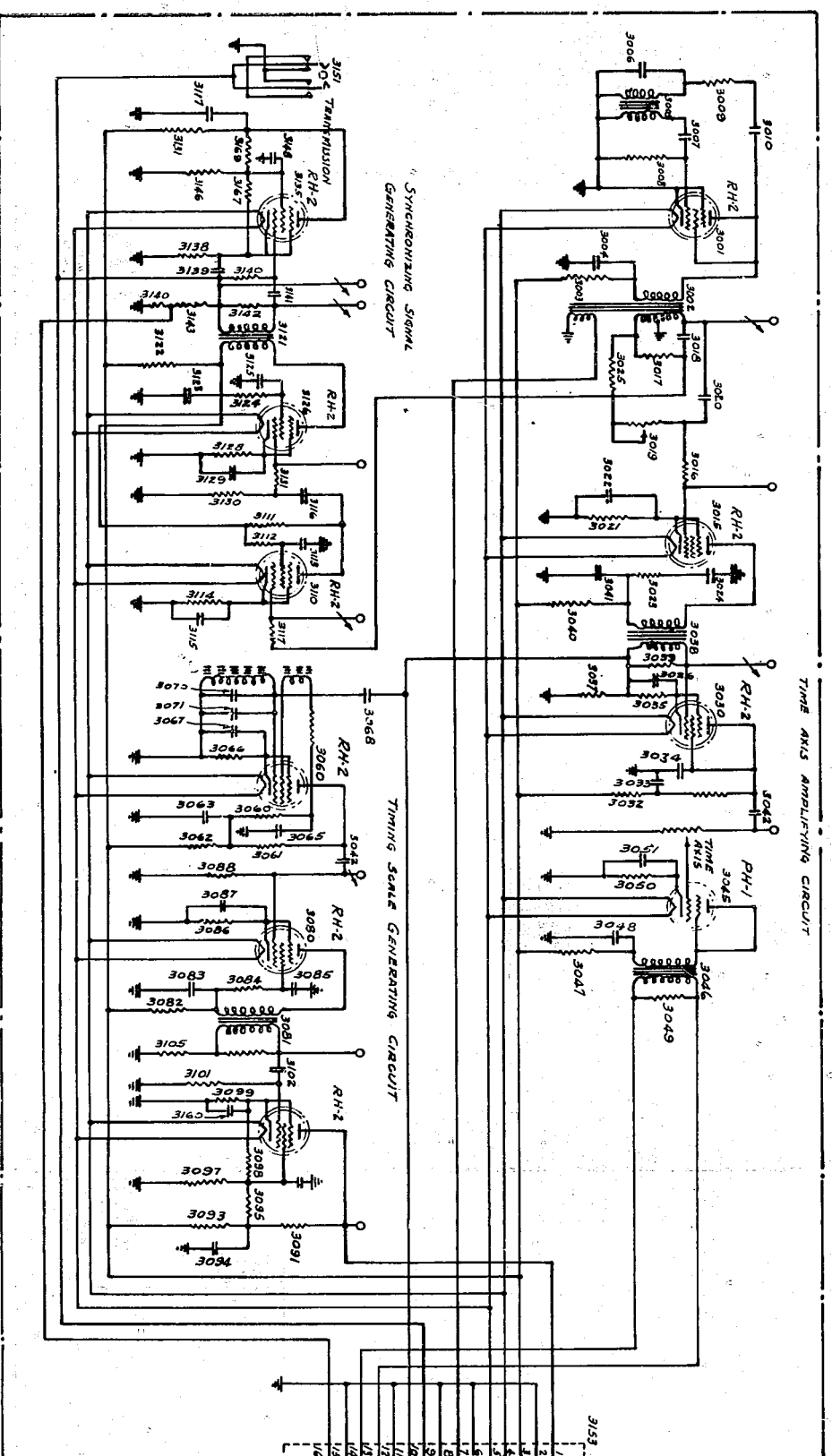
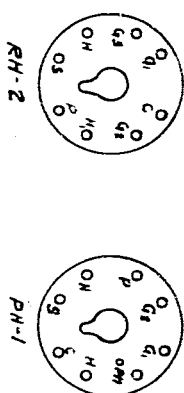
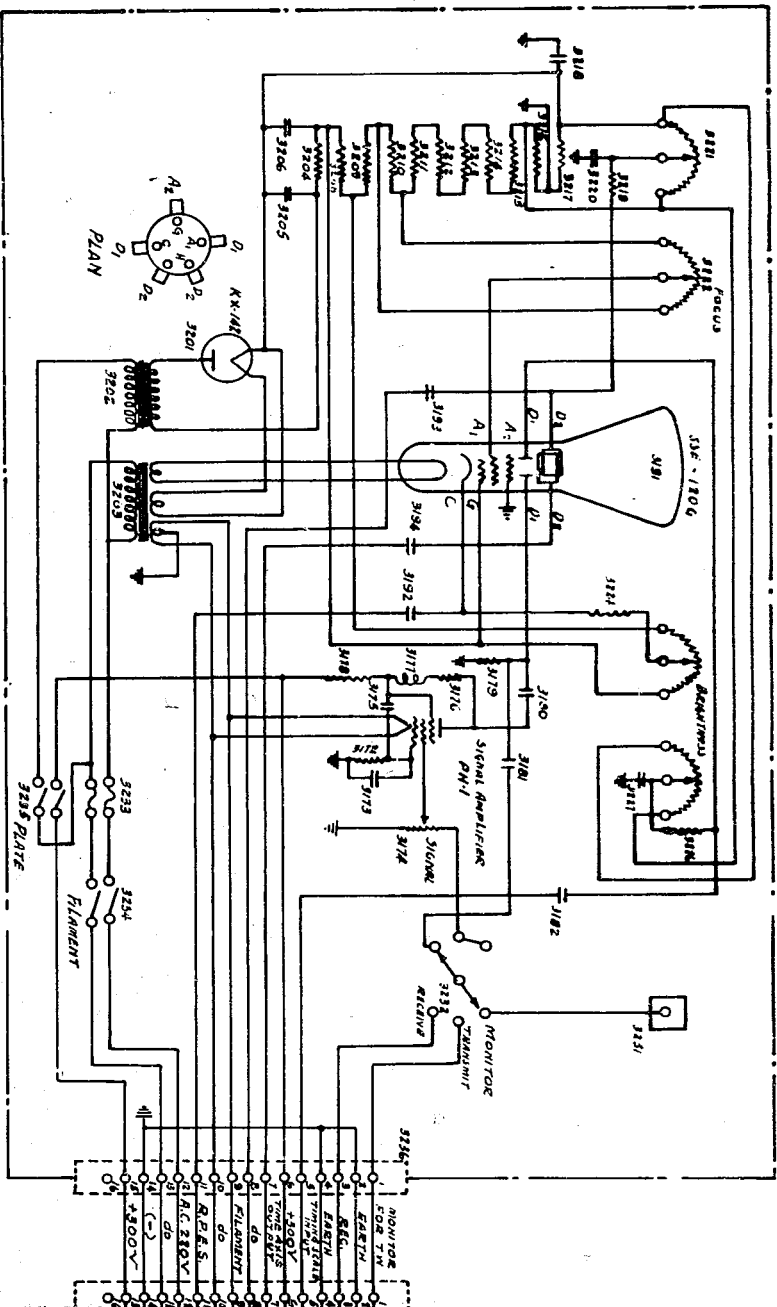
ENCLOSURE (B), continued

<u>NavTechJap No.</u>	<u>ATIS No.</u>	<u>Title</u>
6096	3350	Operating Instructions, Mark 2, Model 2, Modification 3 Radar
6097	3351	Instruction Book, Mark 4, Model 1 Radar
6098	3352	Instruction Book, Temp. Desig. Mark 4, Model 3 Radar
6099	3353	Instruction Book, Mark 4, Model 3, Modification 1 Radar
6106	3385	Radar Maintenance
6155	3357	Installation Drawings, Mark 1, Model 1, Modification 2 Radar
6156	3358	Receiver Operating Instructions, Mark 2, Model 2, Modification 2 Radar
6157	3359	Indicator, Type 3, Mark 2, Model 1 Radar
6158	3360	Operating Instructions, Mark 4, Model 1 Radar
6160	3394	Radar and Radar Intercept Receiver Installation Instructions
6163	3395	Table of Naval Radar
6166	3422	Instructions for Handling on Land the Type 3, Mark 6, Model 4 and Type 3, Model 4 Antenna
6216.2	3404	Experimental Report, Type 2, Mark 1, Model 2, Modification 3 Radar and Radar Using Submarine Antenna
6216.3	3404	Installation Report, Type 3, Mark 1, Model 1 (11K) Radar
6216.5	3404	Report on Tuning the S3 Radar Installed at CHICHIJIMA
6216.7	3404	Tuning Procedure for Mark 4 Radar
6274	3368	Trouble Shooting Table for Temp. Desig. Type 3, Mark 2 Radar, June 1945
6275	3407	Instructions for Installing Radar and Radar Intercept Equipment (Proposed) Land Installations, April 1945
6277	3367	Modifications in Installing Temp. Desig. Type 3, Mark 1, Model 1 Radar, Feb. 1945
6278	3409	Experiments on the Temp. Desig. Mark 6, Model 1 Radar

ENCLOSURE (B), continued

<u>NavTechJap No.</u>	<u>ATIS No.</u>	<u>Title</u>
6279	3369	Temp. Desig. Mark 4, Model 4 Radar
6285	3448	Radar and Radar ⁰ Intercept Installations

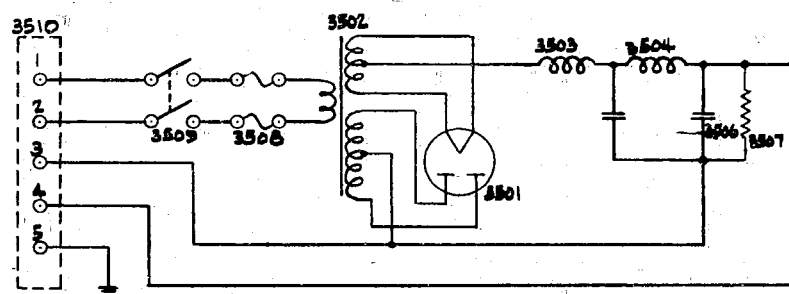




R.P.E.S. = RETURNING FROM EXHAUSTING SIGNAL

MARK 1 MODEL 4
INDICATOR

ENCLOSURE (C), continued



NUMBER	DESCRIPTION	TYPE	NOTES	QUANTITY
3501	RECTIFIER VALVE	K1-323		1
3502	TRANSFORMER RECT.		50 3.3A 2000 0-32A	1
3503	CHOKE	CK-34K 3298	10H 150 MA	1
3504	"	"	"	1
3505	FILTER COND.		4MF 2K0	2
3506	"		"	2
3507	LOAD RESIST		250 1/2 W	1
3508	FUSE		AC 2A	2
3509	SWITCH			1
3510				

Figure 4(C)
INDICATOR POWER SUPPLY

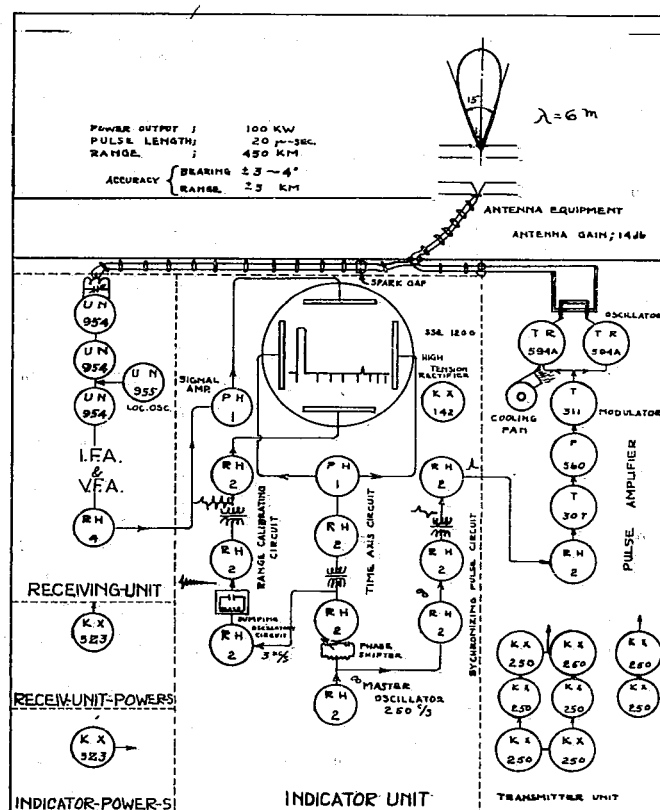


Figure 5(C)
BLOCK DIAGRAM

ENCLOSURE (C), continued

TYPE-14 RADAR
Type 14 List of Spare Parts (1)

Part	Number	Type	Rating	Quantity	Part	Number	Type	Rating	Quantity
Filament Transformer									
Transmitter	1002-1022		5-200-10/12V for 6VA A.C. 1.5KV	1	Transmitter	1572 1573 1574		0.125 0.1 0.075H	1
	1032		5-200-10/10V 2ry for 55VA A.C. 4KV	1	Audio-transformer				
	1052		5-200-10/12V 2ry for 78VA A.C. 7KV	1	Transmitter	1012	TF	225/225mH	1
	1103-1104		5-200-10/10V for 640VA 1.5KV	1		1026 1039		200/450mH	1
	1502-1512		5-200-10/5V 2ry for 18VA A.C. 7KV	1		3005	TY-DON-1313	1.5/1.5H	1
Receiver	1557 - 1562		5-200-10/5V 2ry for 18VA 22KV	1		3002	TF	70/ 45.5/ 0.105H	1
	2307		5-200-10/6.3V /12V for 30.3VA A.C. 1.5KV	1	Indicator	3038	TS	1③ 200mH ①⑤ 500mH ②④ 200mH ②⑥ 500mH	1
	3203		5-200-10/2.5 2.5 for 12.0V 2ry for 1.5, 7, 1.5KV 41.25VA	1		3040	TF	10/ 65H	1
Indicator	Transformer for Rectifier					3069	TY-DON-1317	200/10mH	1
	1507		220V/2.2 2.3 2.0 1.5 1.2 KV 2ry 300VA for A.C. 7KV	1		3081	TTAM	12/12mH	1
Transmitter	1563*	3 phase	200/1.75 4.3 3.9KV 4KVA 2ry for 31KV	1		3121	TC-DOX-1206	100/100mH	1

ENCLOSURE (C), continued

TYPE-14 RADAR
Type 14 List of Spare Parts (2)

Part	Number	Rating	Quantity	Part	Number	Rating	Quantity	Part	Number	Rating	Quantity		
Transmitter	1035 1040	1KΩ	1	Transmitter	1138 300N	300N	1	Transmitter	1004 1024 1034	1Kv	1		
	1003 1008	100KΩ	1		1060 5KΩ	5KΩ	1		1016 1029 1038	2uf	1		
	1010 1010	100KΩ	1		1113 1114	20N	1		1041 1061 1503 1506	7Kv	1		
	1009 1009	200KΩ	1		1060 100N	100N	1		1507 1515 1516 1517	7Kv	1		
	1013 1013	10KΩ	1		1062 200N	200N	1		1042 1063 1056 1057	0.1uf	1		
	1023 1025 1027 1035	10KΩ	1		1575 500N	500N	1		1098 1564 1565	1uf	1		
	1028 1040	10KΩ	1		Mega Ohm				1566 1571	0.2uf	1		
	1053 1055 1569	15KΩ	3		Nor. Temp. 10H				2337 2338	4.0uf	1		
	1014 1015	20KΩ	1		High Temp. 0.5H		1		3004 3007	1uf	1		
	1043 1045 1508 1518 500KΩ	500KΩ	2		Variable Resistance				3035 3041 3055 3067	1uf	1		
Receiver	1037 1566 1567	1KΩ	3	Receiver	Variable Resistance			Receiver	3100 3127 3220 3227	2uf	1		
	2126 2146 2166 2186	350N	1		1136 1137				3102 3115 3129 3175	4uf	1		
	2006 2026 2074	1KΩ	1		5KΩ		1		3040 3505 3506	0.2uf	1		
	2138 2155 2172 2195	5KΩ	2		1KΩ		1		3192 3205 3206	0.2uf	1		
	2140 2256 2166	30KΩ	1		100KΩ		1		Titanium Condenser				
	2128 2140 40KΩ	40KΩ	1		3019 3052 3221 3222		3		1109 1110 1121 1126	600PF	1		
	2128 2275 50KΩ	50KΩ	1		3226 3225 500KΩ		1		1116 1118 1578	1000PF	1		
	2135 2153 2173 2193	100KΩ	1		Receiver	Mica or Acetyl Condenser			1124	10PF	2		
	2011 2030 200KΩ	200KΩ	1			2014 2033 2052 2047			Receiver	100PF	1		
	2011 2030 300KΩ	300KΩ	1			2086 2085 2082 2127				1Kv	1		
	2030 2254 2277 500KΩ	500KΩ	1			2147 2167 2187 2129				1Kv	1		
	2051 2259 2279	20KΩ	1			2139 2137 2156 2197				1Kv	1		
	2148 2152 2168 2172	5KΩ	1			2176 2196 2223 2224				1Kv	1		
	2188 2192 2206 2271	8KΩ	2			2226 2229 2288 2289				1Kv	1		
	3066 3086 3099	2KΩ	2			2291 2303 2304 2309				1Kv	1		
	3114 3128 3138 3172	3KΩ	1			3065 3102 3085 3096				1Kv	1		
	3021 3037 5KΩ	5KΩ	1			3070 0.0005uf				1Kv	1		
	3103 3142 10KΩ	10KΩ	1			3070 0.002uf				1Kv	1		
Indicator	3101 3105 3111 3143 50KΩ	50KΩ	2	Indicator	3034 3076 3116		1	Indicator	3071 x 10		1		
	3064 3084 3112 3124 100KΩ	100KΩ	2		Indicator	3070 0.005uf				3068 3070	1Kv	1	
	3017 3025 200KΩ	200KΩ	1			3102 0.05uf				Electrolytic Condenser			
	3008 3016 3052 3088	500Ω	3			3006 0.005uf				3051 3173	5Kv	1	
	3117 3130 3131 3140 500Ω	500Ω	1			3006 0.01uf				Puse			
	3179 3219 3224 3226 750Ω	750Ω	1			3006 0.02uf				1602 1603 1604	16		
	3176 3178 3050	3050	1			3006 0.25uf				2206 2332	8		
	3032 3040 3062	5KΩ	1			Paper Condenser				3233	8		
	3082 3093 3122 3136 10KΩ	10KΩ	1			1006 1011				Puse			
	3098 3174 25KΩ	25KΩ	1			2257 2262 2281				1602 1604 A.C. 20A	120		
	3003 3095 3149 30KΩ	30KΩ	1			2270 2276 2278 2295				1603 A.C. 5A	10		
	3049 3097 3146 100Ω	100Ω	1			3024 3027 3033				2206 2332 A.C. 3A	80		
Transmitter	3061 3217 100Ω	100Ω	1	Transmitter	3094 3113 3125 3140		1	Transmitter	1602 1604 A.C. 20A		120		
	3212 3213 3215 150Ω	150Ω	1		Indicator	3010 3042 3077 3157				1603 A.C. 5A	10		
	3204 3208 3209 200KΩ	200KΩ	2			3141 3183 3181 3182				2206 2332 A.C. 3A	80		
	3210 3211 3031 3047	300KΩ	1			Heen Lamp				3233 A.C. 3A	80		
	Earth Rod					1139				Notes:			
	Earth Rod					1138				① Type NR-20			
	1111 1112		2							② Type A-100			
			1							③ Type BR-800			
			2							④ Special Type			
			1										

Technical drawing of a radio shack, showing a plan view and a side elevation.

Plan View Dimensions:

- Overall width: 4.830'
- Width of main body: 3.020'
- Width of porch: 1.810' (4.830' - 3.020')
- Door width: 1.500'
- Window width: 1.500'
- Door width (right): 1.500'
- Overall depth: 10.000'
- Depth of porch: 3.000'
- Depth of main body: 6.994'
- Depth of door (left): 2.000'
- Depth of door (right): 2.000'

Side Elevation Dimensions:

- Roof height: 1.500'
- Overall height: 1.500'

Labels:

- TRANSMITTING ELECTRIC WAVE
- INSULATOR
- HIVE LAND TOWER
- HIVE TRAP
- SHOCK CIRCUITING BAR
- FAN ROOM
- DI TYPE TURNTABLE

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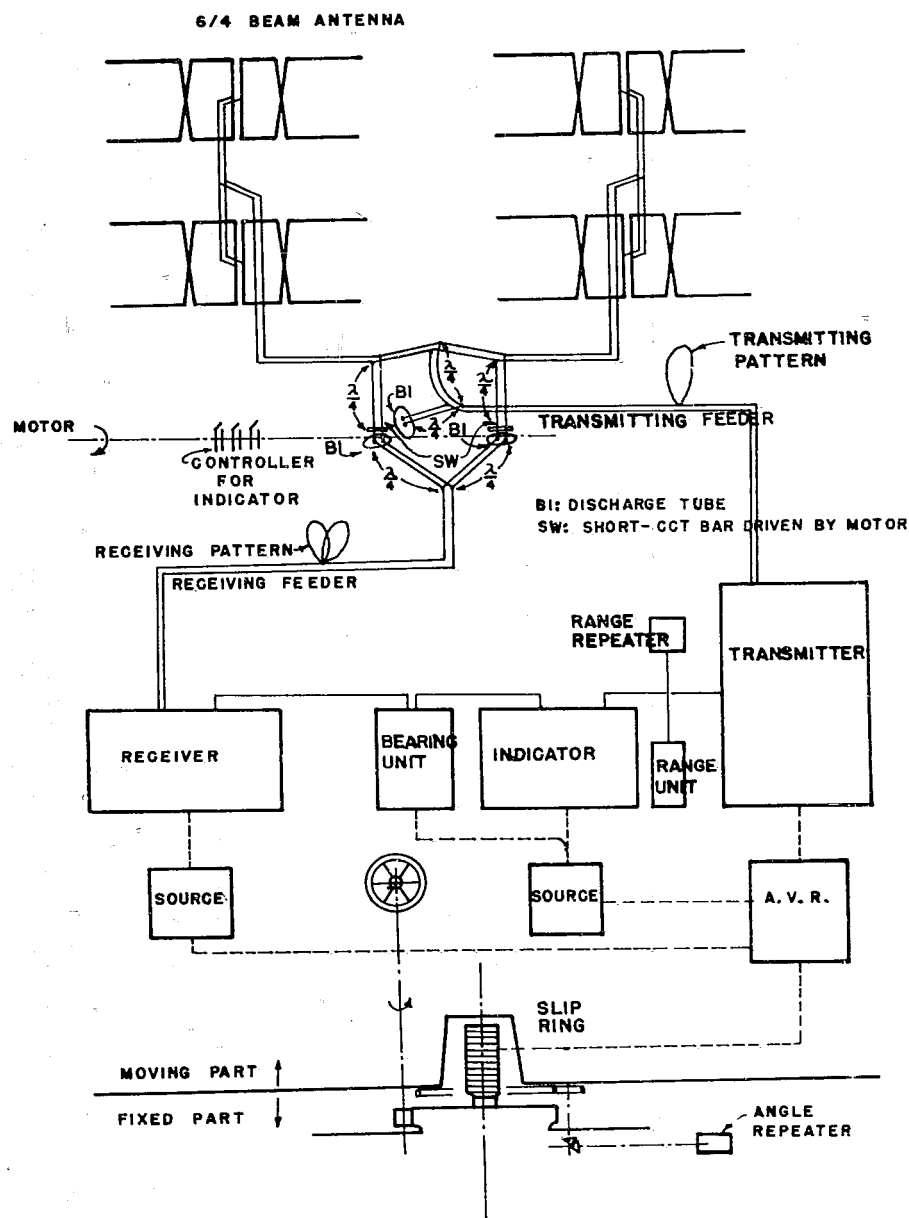
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ENCLOSURE (D), continued

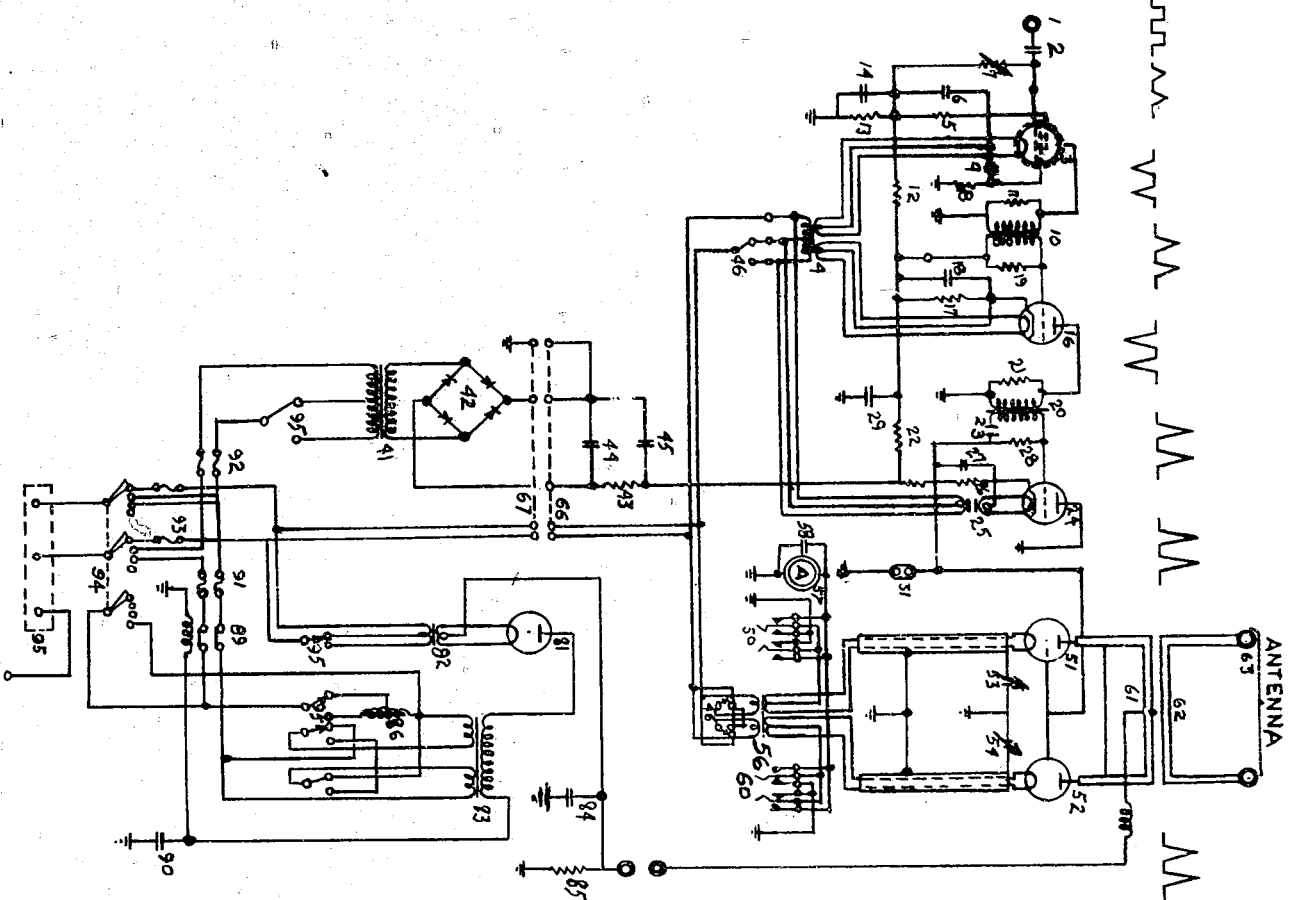
LAND BASED

ACCURACY: ± 1 KM, $\pm 1^\circ$
 RANGE: 200 KM.
 WAVE LENGTH 3M

PULSE LENGTH: 20 μ S
 POWER OUTPUT: 40 KW



BLOCK DIAGRAM 11-3-KAI



NO.	DESIGNATION	MTYPE	NOTES	AMT
1	INPUT TERMINAL	NAVY	SINGLE CONTACT	1
2	COUPLING CONDENSER		10000 PPF	1
3	AMPLIFIER #1	RH-4		1
4	FIL. HEATER TRANSFORMER		974 220 ¹ / ₂ 112V	1
5	CATHODE BIAS CONDENSER	C-2	10 K Ω	1
6	BY-PASS COND. FOR ABOVE #1	OP-654	2 PF 1000V	1
7	LATTICE WORK CONTROL RESIST.	WV-200-S	50 K Ω	1
8	SCREENING LAT. WK. RESIST	C-2	200 K Ω	1
9	BY-PASS COND. FOR ABOVE #8	OP-652	1 PF 1000V 300T	1
10	OUTPUT TRANSFORMER	TF-	300T:300T	1
11	PLATE RESISTANCE	G-2	10 K Ω	1
12	VOLTAGE DROP RESISTANCE	C-5	200 K Ω	1
13	SAME AS ABOVE	C-3	100 K Ω	1
14	BY-PASS COND. FOR ABOVE	OP-654	2 PF 1000V 300T	1
15	AMPLIFIER #2	T-307		1
16	(ILLEG.)			
17	CATHODE BIAS RESIS.	C-2	10 K Ω	1
18	BY-PASS COND. FOR ABOVE	OP-656	2 PF 1000V 300T	1
19	CONTROL LATWK. COND.	C-2	10 K Ω	1
20	OUTPUT TRANSFORMER	TF-	300T:300T	1
21	PLATE RESISTANCE	C-2	10 K Ω	1
22	VOLTAGE DROP RESIST.	C-5	300 K Ω	1
23	BY-PASS COND. FOR ABOVE	OP-656	2 PF 1000V 300T	1
24	MODULATION TUBE	T-307		1
25	FIL. HEATER TRANSFORMER		674 220 ¹ / ₂ 112V	1
26	CATHODE BIAS RESIS.	C-2	20 K Ω	1
27	BY-PASS COND. FOR ABOVE	OP-656	2 PF 3000V	1
28	CONTROL LATWK. RESIS.	C-2	10 K Ω	1
29	PROTECTIVE CONDENSER	OP-653	0.1 PF 3000V	1
30	DIRECTLY COUPL. LATWK. RES.	C-2	20 K Ω	1
31	DISCHARGE	CT-311	227	1
41	POWER SUPPLY TRANSF.			1
42	SELENIUM RECTIFIER			1
43	FILTER RESISTANCE	C-2		8+2
44	FILTER CONDENSER	OP-656	2 PF 3000V	1
45	SAME AS ABOVE	OP-656	2 PF 3000V	1
46	POWER SUPP. CHANGE SW.	CT-311	24	1
51	OSCILLATOR TUBE	T-311		1
52	SAME AS ABOVE			1
53	FILAMENT BY-PASS COND.		CT-311	43
54	SAME AS ABOVE			1
55	FIL. CLOSED CIRCUIT OPEN COIL	CT-311	230	1
56	FIL. HEATER TRANS.		156 220 ¹ / ₂ 112V	1
57	PLATE AMMETER		DC 50 mA	1
58	BY-PASS COND. FOR ABOVE (ILLEG.)	1250		1
59	CHANGE OVER SW. FOR ABOVE #92	92	A " " "	1
60	" " " " " "	92	A " " "	1

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ENCLOSURE (E), continued

RESTRICTED

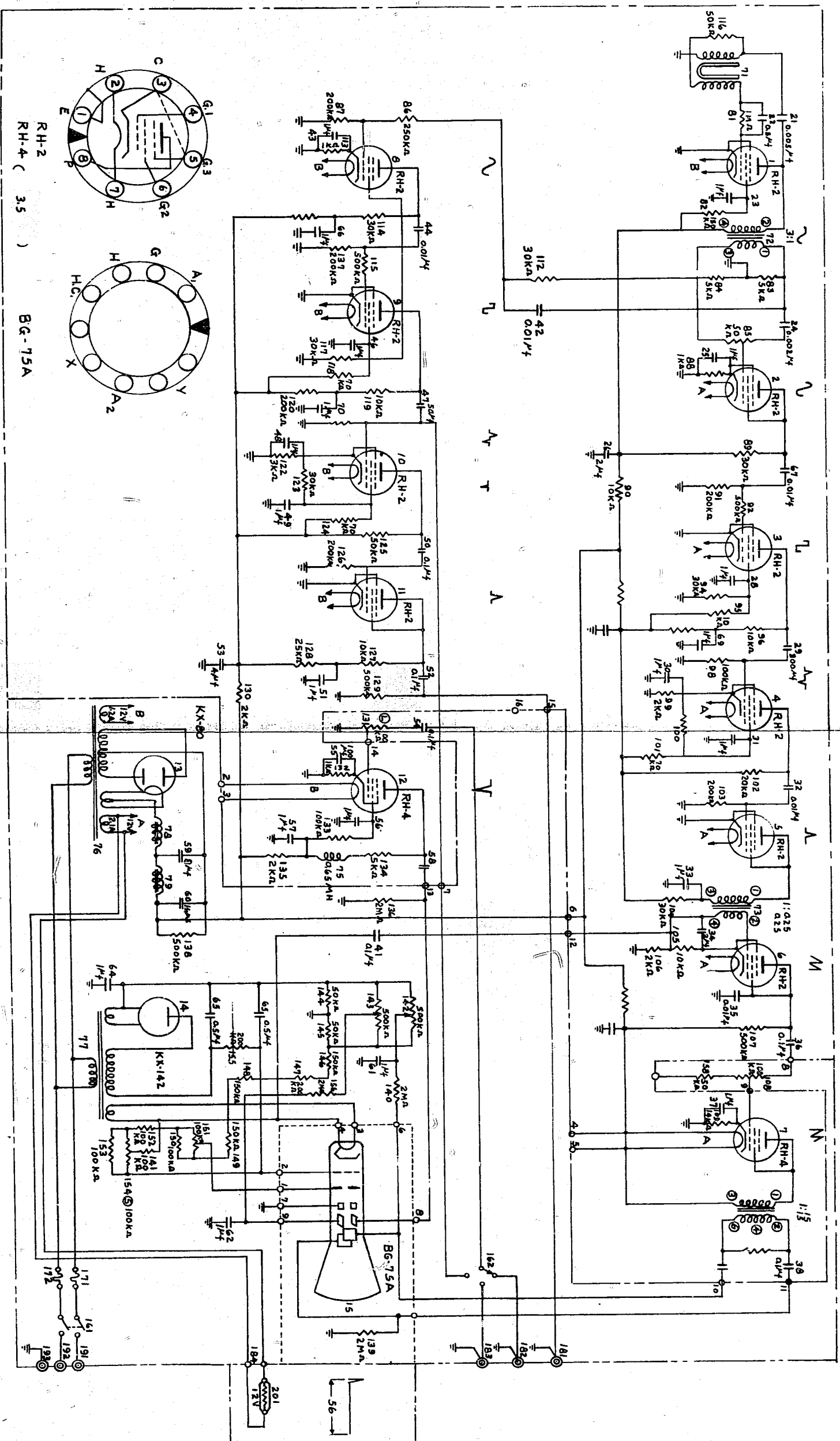
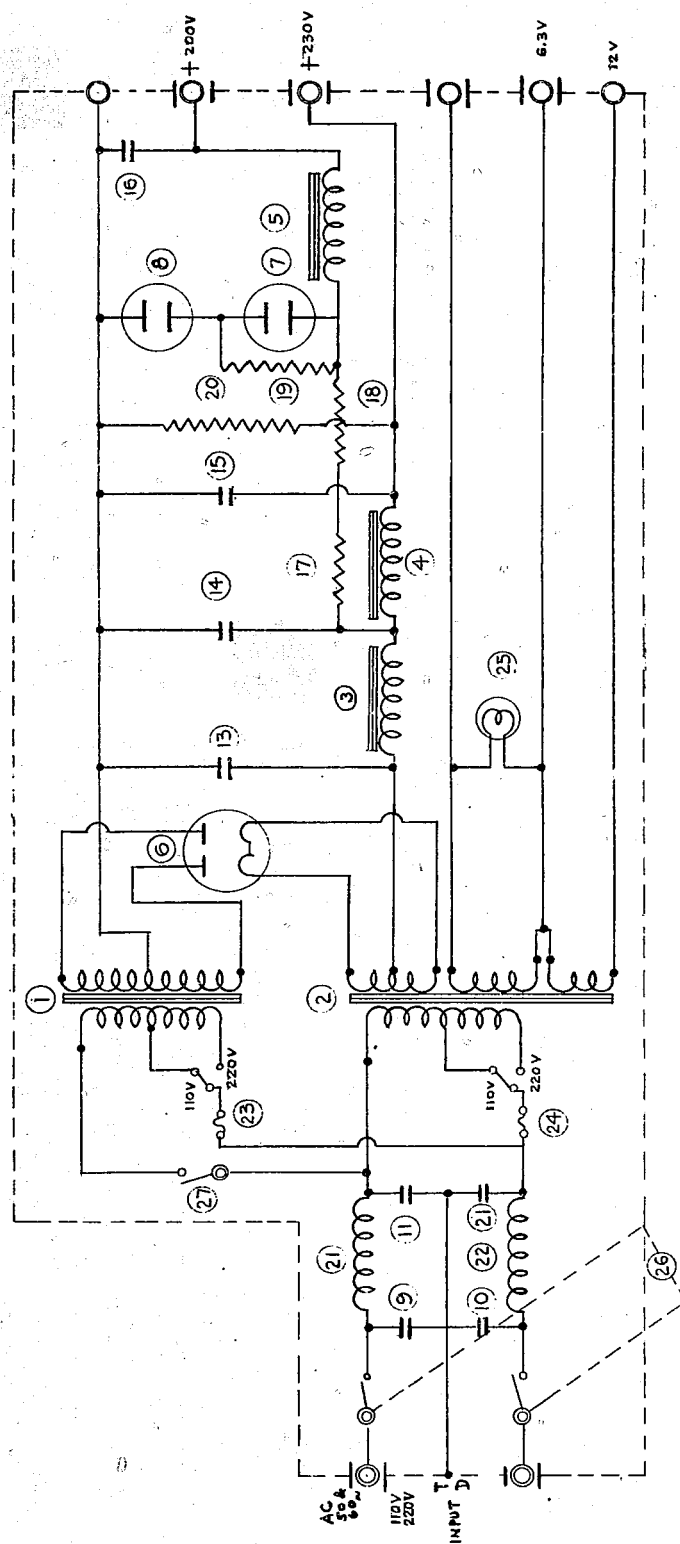


Figure 3(E)

INDICATOR AND SYNCHRONIZER

ENCLOSURE (E), continued



SYMBOL	DESIGNATION	CAPACITY	QUANTITY	NOTE	SYMBOL	DESIGNATION	CAPACITY	QUANTITY	NOTE
1	POWER TRANSFORMER	100V/220V/0-300V	1		15	PAPER CONDENSER	2 MF X 2		STANDARD MOD.
2	"	100V/220V/0-300V	1		16	"	"		"
3	LOW FREQ. CHOKE COIL	100H/220V/0-300V	1		17	FIXED RESISTANCE	2 K Ω		MODEL 15 HC
4	"	100H/220V/0-300V	1		18	"	1 K Ω		"
5	"	100H/220V/0-300V	1		19	"	500 K Ω		MOD. B20RKN00H
6	VACUUM TUBE	KX-523	1		20	"	100 Ω		"
7	CONSTANT VOLTAGE DISCHARGE TUBE	VRA-55/80	1		21	HIGH FREQUENCY CHOKE COIL	"		"
8	"	VRA-55/80	1		22	"	"		"
9	NICA CONDENSER	0.01 MF	1	NAVY STD MOD. 2	23	FUSE	"		ALLOWABLE CURRENT-LAMP
10	"	"	1	"	24	"	"		"
11	"	"	1	"	25	INDICATOR LIGHT	"		"
12	"	"	1	"	26	POWER SWITCH	"		2 PRONGS
13	PAPER CONDENSER	2 MF	1	NAVY STD MOD. 1-100	27	"	"		"
14	"	2 MF X 2	1	"	28	"	"		"

FIGURE 4(B)
REGULATED RECTIFIER

ENCLOSURE (E), continued

RADAR 3-11

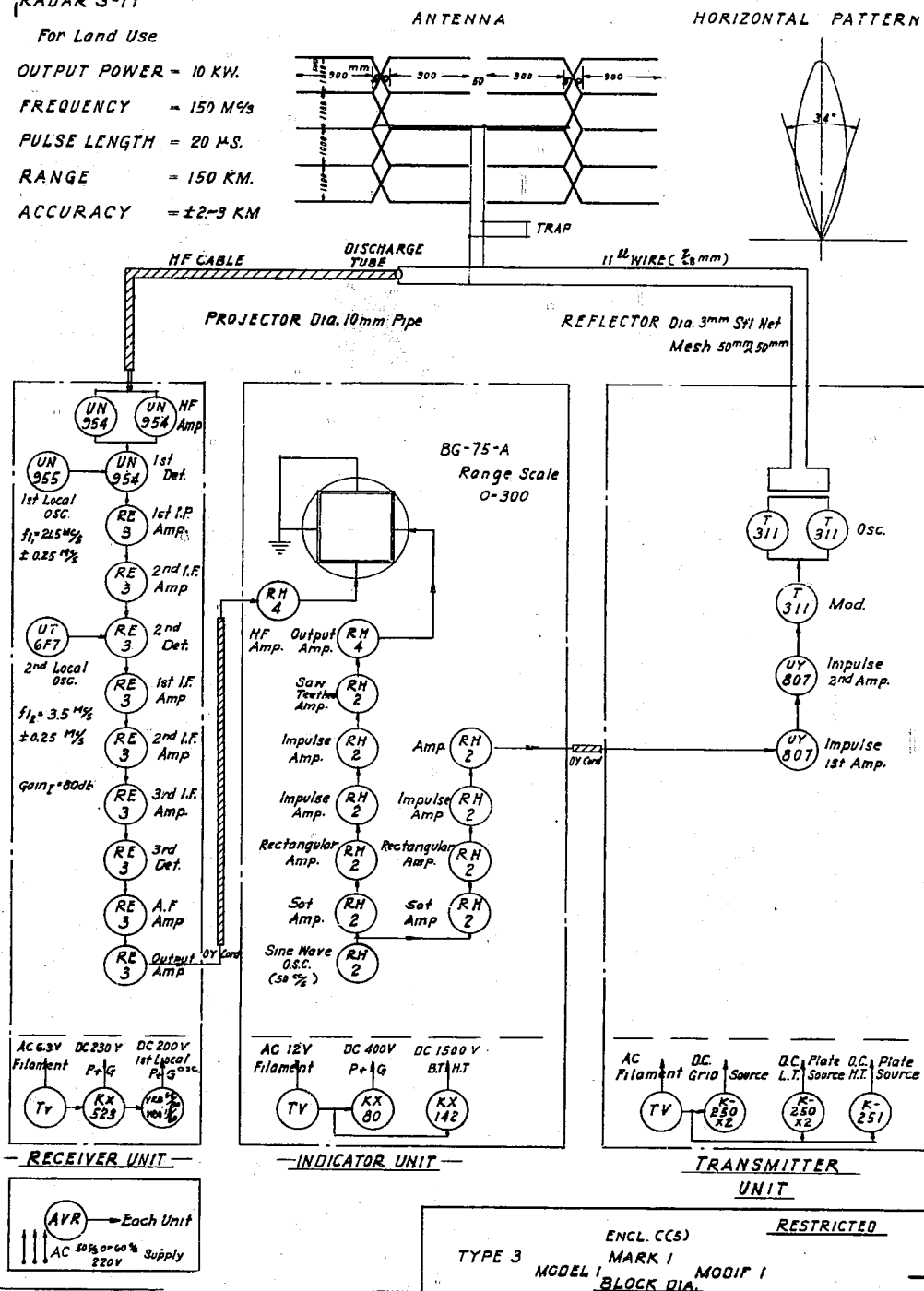
For Land Use

OUTPUT POWER = 10 KW.

FREQUENCY = 150 Mc/s

PULSE LENGTH = 20 μ S.

RANGE = 150 KM.

ACCURACY = $\pm 2-3$ KMFigure 5(B)
BLOCK DIAGRAM

ENCLOSURE (F)

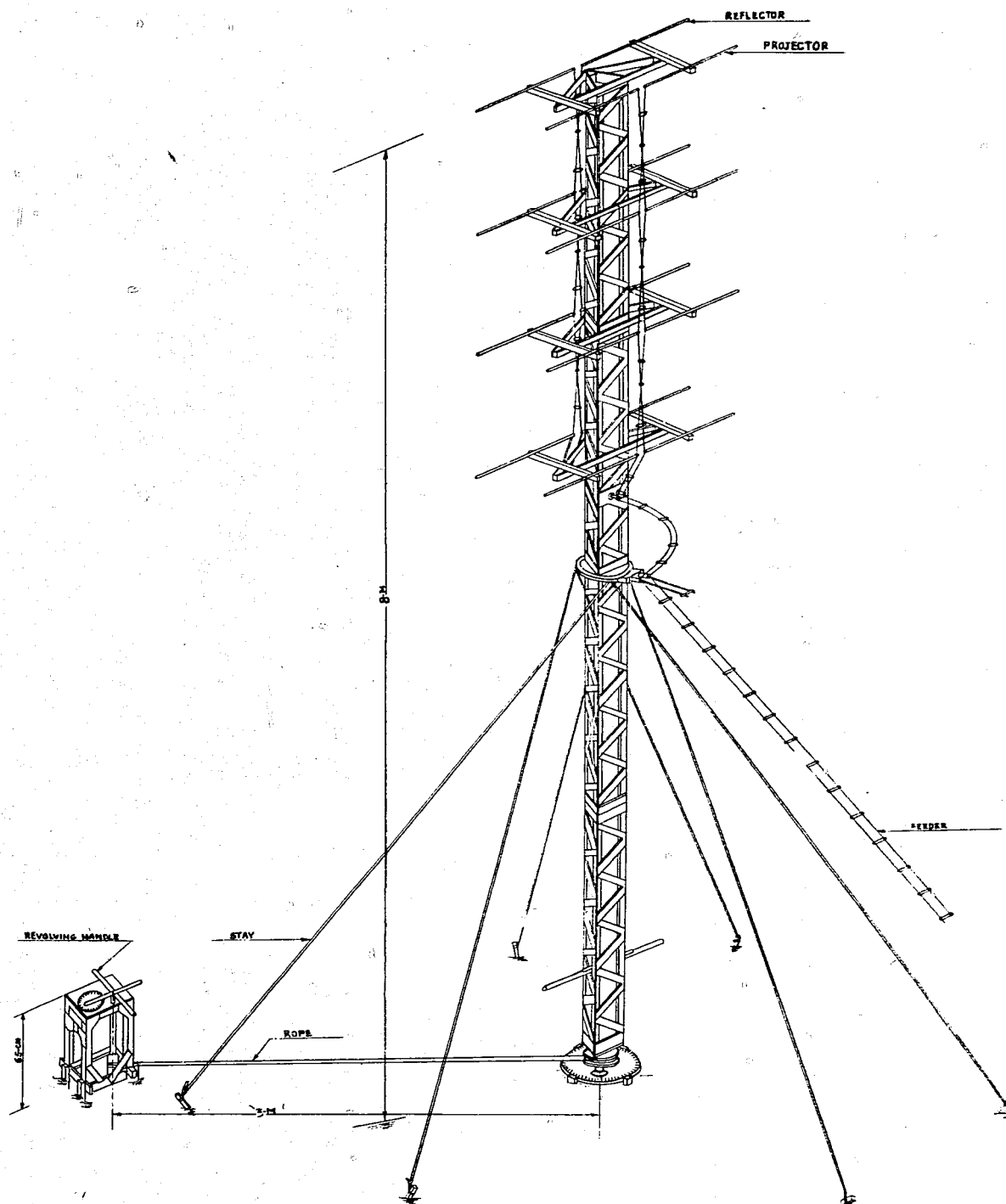
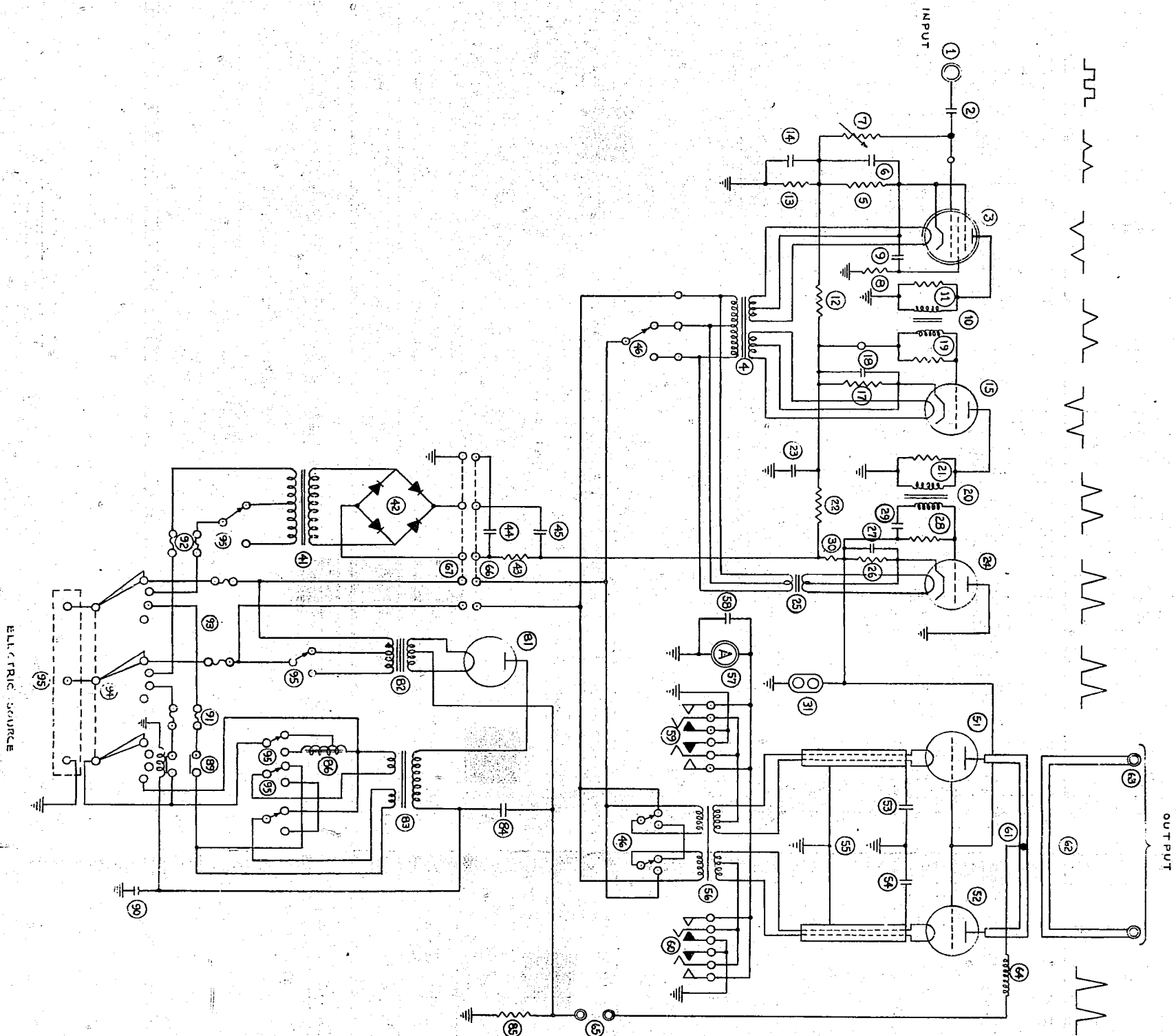
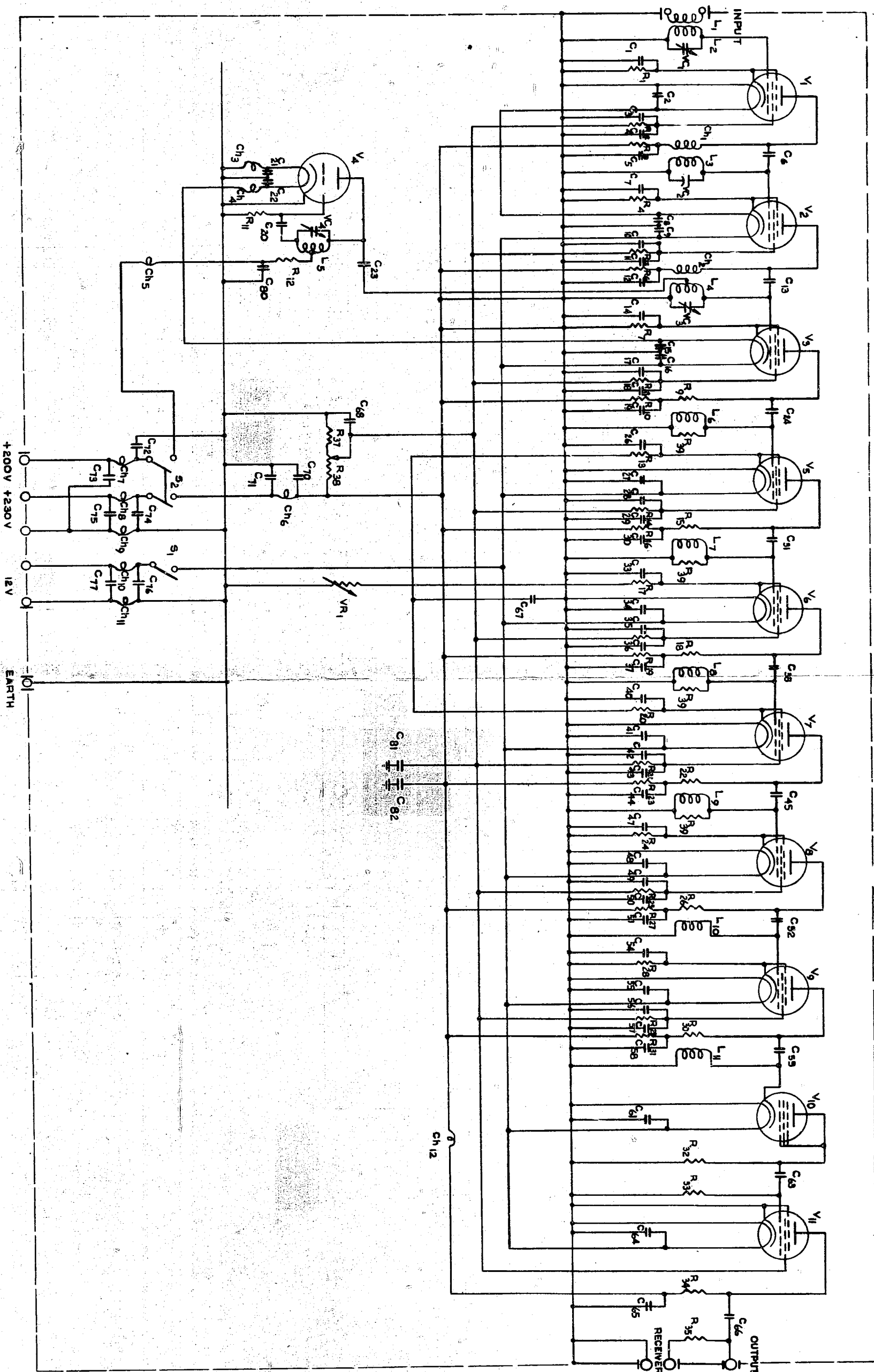


Figure 1(F)
ANTENNA #1



NO.	NAME	TYPE	NUMERICAL VALUE	AMT.
1	INPUT TERMINAL			
2	COUPLING CONDENSER	TYPE-2	ONE POLE CONDENSER	1
3	FIRST AMPLIFIER TUBE	6X4	10000 P.F. (H.C.)	1
4	FIRST TUBE FILAMENT TRANSFORMER	RM-4	9V 220 ¹¹ 10 ¹² 12 ¹²	1
5	CATHODE BIAS RESISTANCE	C-2	10 K.Ω	1
6	BYPASS CONDENSER	OP-654	2 ¹¹ 1 ¹¹ (C.F.)	1
7	CONTROL GRID RESISTANCE	WZ-20	50 K.Ω	1
8	SCREEN GRID RESISTANCE	C-2	200 K.Ω	1
9	BYPASS CONDENSER	OP-652	1 ¹¹ 1 ¹¹ (C.F.)	1
10	OUTPUT TRANSFORMER	TYPE-7F	300 ¹¹ 300 ¹¹	1
11	PLATE RESISTANCE	C-2	10 K.Ω	1
12	VOLTAGE DROP RESISTANCE	C-3	200 K.Ω	1
13	"	C-3	100 K.Ω	1
14	BYPASS CONDENSER	OP-654	2 ¹¹ 1 ¹¹ (C.F.)	1
15	SECOND AMPLIFIER TUBE	T-307		1
17	CATHODE BIAS RESISTANCE	C-2	10 K.Ω	1
18	BYPASS CONDENSER	OP-656	2 ¹¹ 3 ¹¹ (C.F.)	1
19	CONTROL GRID RESISTANCE	C-2	10 K.Ω	1
20	OUTPUT TRANSFORMER	TYPE-7F	300 ¹¹ 300 ¹¹	1
21	PLATE RESISTANCE	C-2	10 K.Ω	1
22	VOLTAGE DROP RESISTANCE	C-5	30 K.Ω	1
23	BYPASS CONDENSER	OP-656	2 ¹¹ 3 ¹¹ (C.F.)	1
24	MODULATOR TUBE	T-307		1
25	MODULATOR TUBE FILAMENT		6V 220 ¹¹ 110 ¹¹ 12 ¹¹	1
26	TRANSFORMER		20 K.Ω	1
27	CATHODE BIAS RESISTANCE	C-2	20 K.Ω	1
28	BYPASS CONDENSER	OP-656	2 ¹¹ 3 ¹¹ (C.F.)	1
29	CONTROL GRID RESISTANCE	C-2	20 K.Ω	1
30	DC CHECKING CONDENSER	OP-653	0.1 ¹¹ 3 ¹¹ (C.F.)	1
31	GRID SERIES RESISTANCE	C-2	20 K.Ω	1
32	ARRESTER	CT-31027		1
41	SOURCE TRANSFORMER			1
42	SELEN			1
43	SMOOTHING RESISTANCE	C-2		1
44	SMOOTHING CONDENSER	OP-656	2 ¹¹ 3 ¹¹ (C.F.)	1
45	"	"	"	1
46	SOURCE EXCHANGER	CT-31024		1
51	OSCILLATOR TUBE	T-311		1
52	"	"		1
53	FILAMENT BIAS CONDENSER	CT-31123		1
54	"	"		1
55	FILAMENT TUNING COIL	CT-31123		1
56	FILAMENT TRANSFORMER	TYPE-7	150 ¹¹ 220 ¹¹ 110 ¹¹ 12 ¹¹	1
57	PLATE AMMETER	D.C. 50 MA		1
58	BYPASS CONDENSER	D-1250	1000 P.F. (TITANIUM)	1
59	PLATE AMMETER EXCHANGER	H-32	A	1
60	"	"		1
61	PLATE TUNING COIL	CT-31126		1
62	ANTENNA COUPLING COIL	CT-31125		1
63	ANTENNA COUPLING COIL	CT-31125		1
64	ANTENNA COUPLING COIL	CT-31125		1
65	HIGH FREQUENCY CHOKING COIL	CT-31129		1
66	CONNECTING TERMINAL BOARD	CT-31128		1
67	"	"		1
81	PLATE SOURCE RECTIFIER	K-250		1
82	FILAMENT TRANSFORMER	18V 320 ¹¹ 110 ¹¹ 12 ¹¹		1
83	SOURCE TRANSFORMER	50V 220 ¹¹ 110 ¹¹ 12 ¹¹		1
84	SMOOTHING CONDENSER	OP-606	0.2 ¹¹ 20 ¹¹ (C.F.)	1
85	LOAD RESISTANCE	C-3	1 ¹¹ 1 ¹¹	1
86	INDUCTION COIL	0.015 H	0.06 H	1
89	OVERLOAD RELAY	CT-31124		1
90	BYPASS CONDENSER	OP-655	1 ¹¹ 3 ¹¹ (C.F.)	1
91	FUSE	H-302	TYPE 2	1
92	"	"	"	1
93	"	"	"	1
94	SOURCE SWITCH	CT-31124		1
95	TERMINAL BOARD	CT-31125		1
96	(SEE PCE EXCHANGE)			1

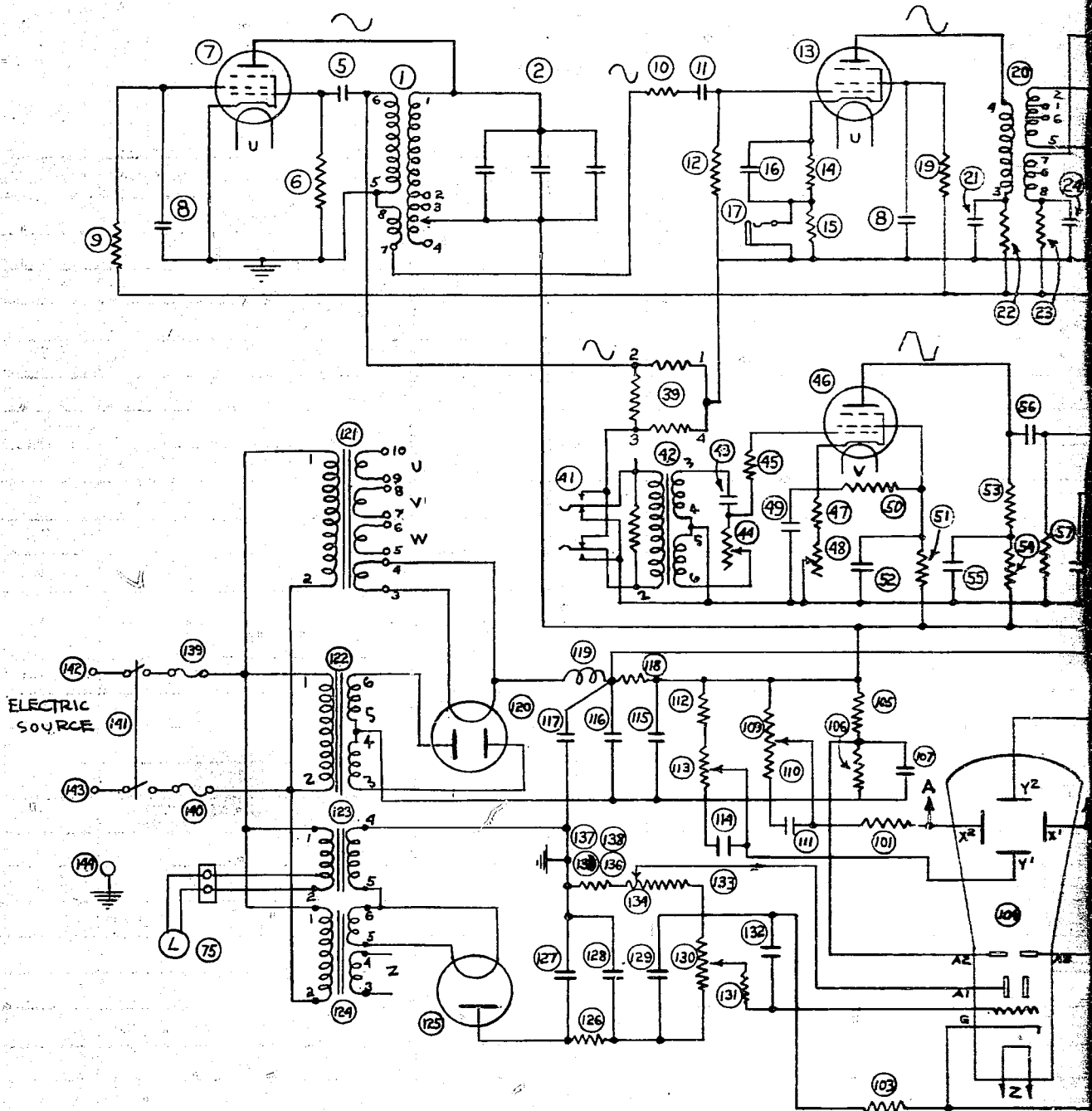
Figure 3(F)
TRANSMITTER

Figure 4(F)
RECEIVER

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ENCL. D(4)
TYPE 3 MARK I MODEL 3

RESTRICTED



NO.	NAME	VALUE	TYPE	AMT.	NO.	NAME	VALUE	TYPE
1	MAIN OSCILLATOR COIL	(1-3) 800 MH	218-RM 12	1	44	PHASE SHIFTING RESISTANCE CONTROL	500 K Ω	NY-20
2	" " CONDENSER	1-3 0.001 MF	917-N-4325	1	45	CONTROL GRID BIAS RESISTOR	100 K Ω	C-2
5	MAIN OSC. GRID CONDENSER	0.1 MF 1KV	M-60	1	46	AMPLIFIER (b)		UZ-6C6
6	CONTROL GRID BIAS RESISTANCE	10 K Ω	C-2	1	47	CATHODE RESISTANCE	0.2 K Ω	C-2
7	MAIN OSCILLATOR TUBE		UZ-6C6	1	48	" " CONTROL	10 K Ω	NY-20
8	S.G. BYPASS COND.	1 MF 2KV	KOD-1020	1	49	" BYPASS CONDENSER	4 MF 2KV	KOD-1020
9	S.G. RESISTANCE	100 K Ω	C-2	1	50	AMPLIFIER BIAS VOLTAGE DIVIDER RES.	40 K Ω	C-2
10	GRID RESISTANCE	100 K Ω	C-2	1	51	S.G. RESISTOR	10 K Ω	C-2
11	COUPLING COND.	0.005 1KV	M-60	1	52	" BYPASS COND.	10 MF 2KV	KOD-1020
12	CONTROL GRID BIAS RESISTOR	100 K Ω	C-2	1	53	PLATE SERIES RESISTOR	10 K Ω	C-2
13	AMPLIFIER TUBE (a)		UZ-6C6	1	54	" " "		
14	CATHODE RESISTOR (a)	15 K Ω	C-2	1	55	" BYPASS COND.	10 MF 2KV	KOD-1020
15	" " "	.5 K Ω	C-2	1	56	COUPLING CONDENSER	1 MF 1KV	M-60
16	" BYPASS COND.	1 MF 2KV	KOD-1020	1	57	CONTROL GRID BIAS RESISTOR	100 K Ω	C-2
17	MAIN OSC. WATCHING JACK	MJ-7 JACK	MOD-95263	1	58	SATURATED AMPLIFIER (c)		UZ-6C6
18	S.G. BYPASS COND.	1 MF 2KV	KOD-1020	1	59	CATHODE RESISTANCE	10 K Ω	C-2
19	S.G. RESISTOR	100 K Ω	C-2	1	60	" BYPASS COND.	4 MF 2KV	KOD-1020
20	BACK COUP COIL FOR DAMPED OSCILLATOR		201-SG-16	1	61	SAT. AMPL. (c) VOLTAGE DIVIDER RESIS.	50 K Ω	C-2
21	PLATE BYPASS COND.	10 MF 2KV	KOD-1020	1	62	S.G. RESISTOR	100 K Ω	C-2
22	" RESISTOR	5 K Ω	C-2	1	63	" BYPASS COND.	1 MF 2KV	KOD-1020
23	" " "	5 K Ω	C-2	1	64	PLATE SERIES RESISTOR	20 K Ω	C-2
24	" BYPASS COND.	1 MF 2KV	KOD-1020	1	65	" " "	3 K Ω	C-2
25	DAMPED OSCILLATOR TUBE		UZ-6C6	1	66	" " "	10 K Ω	C-2
26	CATHODE RESISTOR	50 K Ω	C-2	1	67	" " BYPASS COND.	1 MF 2KV	KOD-1020
27	" " CONTROL	20 K Ω	NV-200 SA	1	68	COUPLING RESISTOR	100 K Ω	C-2
28	" BYPASS COND.	0.015 MF 1KV	M-60	1	69	" COND.	1 MF 1KV	M-60
29	CONTROL GRID RESISTOR	100 K Ω	C-2	1	70	CONTROL GRID BIAS RESISTOR	300 K Ω	C-2
30	OUTPUT AMPLIFIER TUBE		UZ-6C6	1	71	SAW-TEETHED OSC. TOR		UZ-6C6
31	CATHODE RESISTOR	10 K Ω	C-2	1				
32	" " "	20 K Ω	C-2	1				
33	" BYPASS COND.	10 MF 2KV	KOD-1020	1	76	TIME AXIS SAW-TEETHED WAVE COND.	0.005 MF 1KV	M-60
34	PLATE RESISTOR	10 K Ω	C-2	1	77	" " AMPLITUDE CONTROL	30 K Ω	NY-20
35	" BYPASS COND.	10 MF 2KV	KOD-1020	1	78	" " AUXILIARY RESISTOR	20 K Ω	C-2
36	SYNCHROUS SIGNAL COUPLING COND.	1 MF 1KV	M-60	1	79	" " AMPLITUDE CONT. BYPASS COND.	1 MF 2KV	KOD-1020
37	" " " RESISTOR	500 K Ω	C-2	1	80			
38	CONCENT. FOR TRANS. SYNC. WAVE			1	81	TIME AXIS AMP CONT. BYPASS COND.	500-3000	102-S
39	RESIS. ATTEN. CHECKING FOR BACK COUP	1000-2 GDB	TYPE 803	1	82	" " VOLTAGE COUPLING COND	1 MF 1KV	M-60
40	KEY CHECKING FOR TIME AXIS	TYPE 92	72-A NEM-4154	1	83	SIGNAL CONCENT		
41	MATCHING RESISTOR	10 K Ω	C-2	1	84	TRANSMISSION WATCHING SIGNAL CONCENT		
42	MAIN OSC. SINE WAVE INPUT TRANS.		207-86-55	1	85	WARNING WATCHING EXCHANGE KEY	TYPE 406	406
43	PHASE SHIFTING COND.	500 MF	M-60	1	86	SIGNAL INPUT COUPLING COND.	1 MF 2KV	KOD-1020

SYMBOL	CONSTANT & TYPE	NOTE	SYMBOL	CONSTANT & TYPE	NOTE	SYMBOL	CONSTANT
C1	100PF ± 10% B-12	TITANIUM CONDENSER				C77	0.01 μF ± 20%
C2	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C40	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER		
C3			C41				
C4	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	C42			C80	0.01 μF ± 20%
C5	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C43	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	C81	
C6	50PF ± 10% B-12	TITANIUM CONDENSER	C44	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C82	
C7	100PF ± 10% B-12		C45	50PF ± 10% B-12	TITANIUM CONDENSER		
C8	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER				Ch1	
C9			C47	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	Ch2	
C10			C48			Ch3	
C11	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	C49			Ch4	
C12	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C50	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	Ch5	
C13	50PF ± 10% B-12	TITANIUM CONDENSER	C51	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	Ch6	
C14	100PF ± 10% B-12		C52	50PF ± 10% B-12	TITANIUM CONDENSER	Ch7	
C15	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER				Ch8	
C16			C54	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	Ch9	
C17			C55			Ch10	
C18	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	C56			Ch11	
C19	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C57	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	Ch12	
C20	10PF ± 10% B-10	TITANIUM CONDENSER	C58	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER		
C21	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C59	50PF ± 10% B-12	TITANIUM CONDENSER	L1	
C22						L2	
C23	2PF ± 10% B-10	TITANIUM CONDENSER	C61	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	L3	
C24	50PF ± 10% B-12					L4	
			C63	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	L5	
C26	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C64	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	L6	
C27			C65	4 μF ± 20% NO-2 TYPE-1		L7	
C28			C66	0.5 μF ± 20% NO-Ro TYPE-1		L8	
C29	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	C67			L9	
C30	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C68			L10	
C31	50PF ± 10% B-12	TITANIUM CONDENSER				L11	
			C70	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER		
C33	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C71			R1	0.5K Ω ± 1%
C34			C72			R2	2K Ω ± 1%
C35			C73			R3	
C36	0.5 μF ± 20% NO-Ro TYPE-1	PAPER CONDENSER	C74			R4	0.5K Ω ± 1%
C37	0.01 μF ± 20% TYPE-2	MICA OR ACETILE CONDENSER	C75			R5	2K Ω ± 1%
C38	10PF ± 10% B-12	TITANIUM CONDENSER	C76			R6	

SYMBOL	CONSTANT & TYPE	NOTE	SYMBOL	CONSTANT & TYPE	NOTE	SYMBOL	CONSTANT & TYPE	NOTE
C 77	0.01 μ F \pm 20% TYPE-2	MICA OR ACETILE CONDENSER	R 7	1 K Ω \pm 10% TYPE-D-0.25		V 1	UN-954	
			R 8	2 K Ω \pm 10%		V 2		
			R 9	10 K Ω \pm 10%		V 3		
C 80	0.01 μ F \pm 20% TYPE-2	MICA OR ACETILE CONDENSER	R 10	2 K Ω \pm 10%		V 4	UN-955	
C 81			R 11	50 K Ω \pm 10%		V 5	RH-2	
C 82			R 12	2 K Ω \pm 10%		V 6		
			R 13	0.3 K Ω \pm 10%		V 7		
Ch 1			R 14	2 K Ω \pm 10%		V 8		
Ch 2			R 15	10 K Ω \pm 10% TYPE-D-1		V 9		
Ch 3			R 16	2 K Ω \pm 10% TYPE-D-0.25		V 10		
Ch 4			R 17	0.3 K Ω \pm 10%		V 11		
Ch 5			R 18	10 K Ω \pm 10% TYPE-D-1				
Ch 6			R 19	2 K Ω \pm 10% TYPE-D-0.25		Vc 1	ρ F \pm 15%	
Ch 7			R 20	0.3 K Ω \pm 10%		Vc 2		HALF-FIXED
Ch 8			R 21	2 K Ω \pm 10%		Vc 3		
Ch 9			R 22	10 K Ω \pm 10% TYPE-D-1		Vc 4		
Ch 10			R 23	2 K Ω \pm 10% TYPE-D-0.25				
Ch 11			R 24	0.3 K Ω \pm 10%		VR 1	5 K Ω \pm 20% TYPE-10% NV-35C	
Ch 12			R 25	2 K Ω \pm 10%				
			R 26	10 K Ω \pm 10% TYPE-D-1				
L 1			R 27	2 K Ω \pm 10% TYPE-D-0.25				
L 2			R 28	0.3 K Ω \pm 10%				
L 3			R 29	2 K Ω \pm 10%				
L 4			R 30	10 K Ω \pm 10% TYPE-D-1				
L 5			R 31	20 K Ω \pm 10% TYPE-D-0.25				
L 6			R 32	10 K Ω \pm 10% TYPE-D-1				
L 7			R 33	100 K Ω \pm 10% TYPE-D-0.25				
L 8			R 34	10 K Ω \pm 10% TYPE-D-2				
L 9			R 35	50 K Ω \pm 10% TYPE-D-1				
L 10			R 36	2 K Ω \pm 10% TYPE-D-0.25				
L 11			R 37	5 K Ω \pm 10% TYPE-20W	WIRE RESISTANCE			
			R 38					
R 1	0.5 K Ω \pm 10% TYPE-D-0.25		R 39	30 K Ω \pm 10% TYPE-D-0.25				
R 2	2 K Ω \pm 10%							
R 3								
R 4	0.5 K Ω \pm 10%		S 1		T-STYLE SNAP SWITCH			
R 5	2 K Ω \pm 10%		S 2					
R 6								

Figure 6(F)
INDICATOR

ENCLOSURE (F), continued

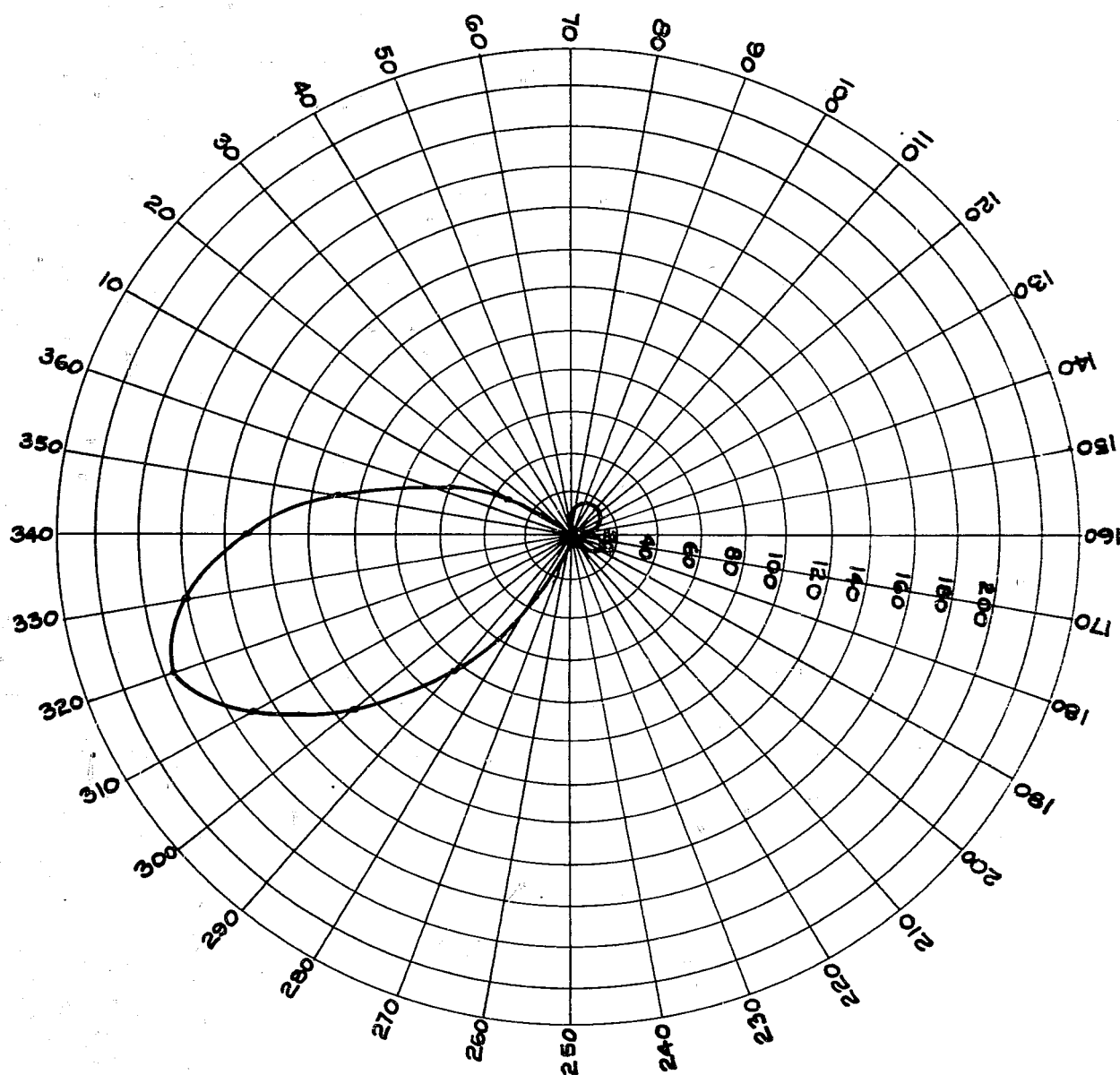
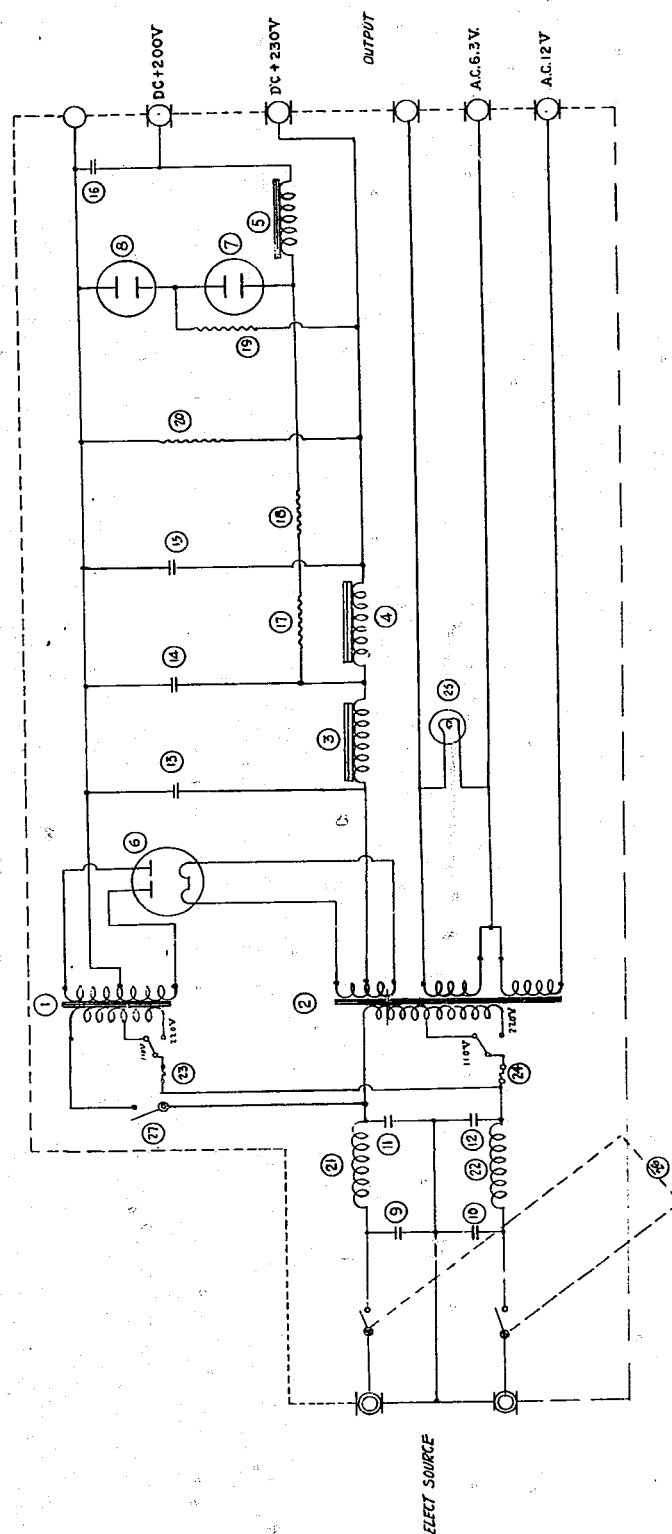


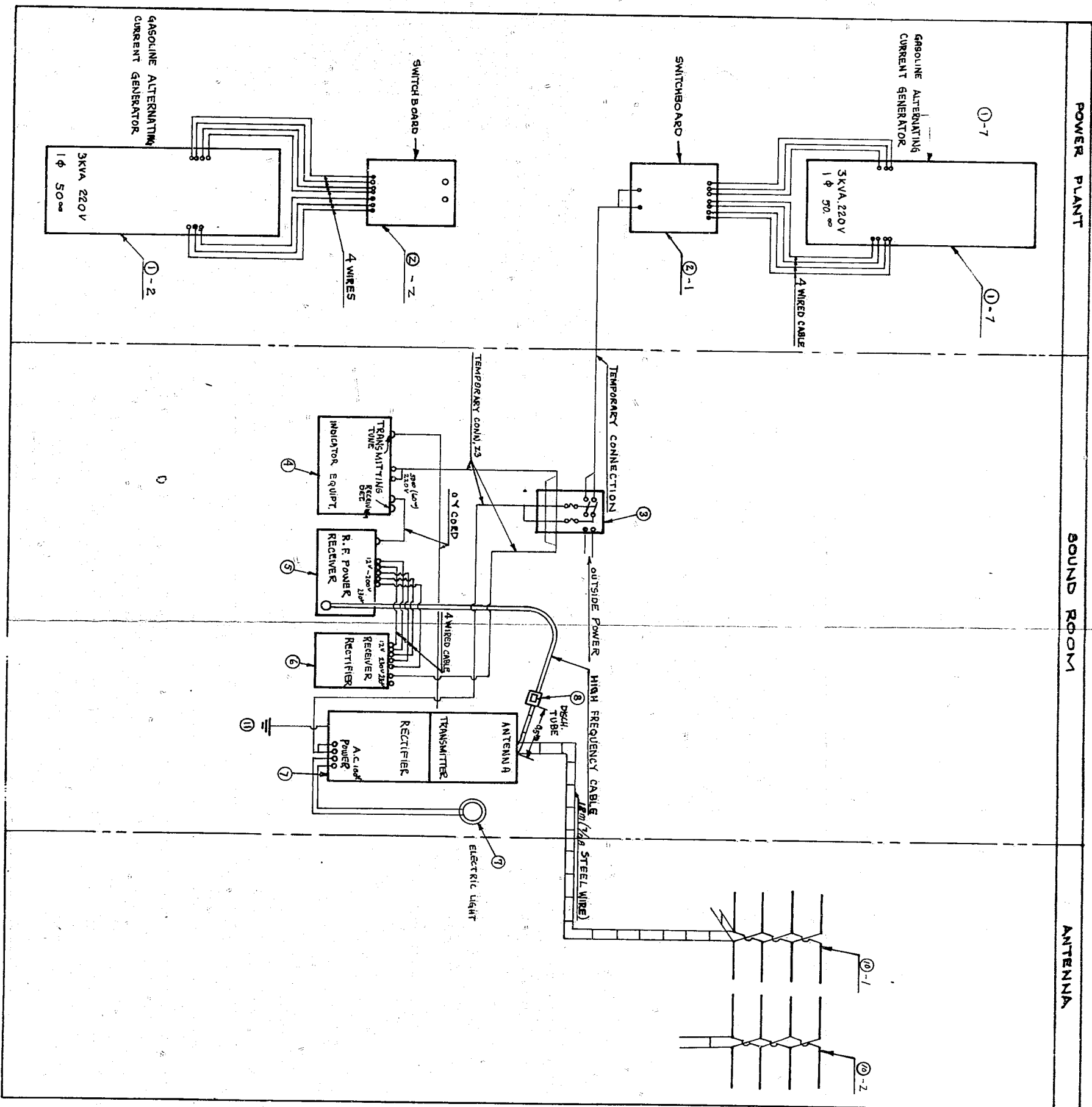
Figure 8(F)
HORIZONTAL ANTENNA PATTERN

ENCLOSURE (F), continued



NO	NAME	HYPERION WIRE	TYPE	AMOUNT	NO	NAME	HYPERION WIRE	TYPE	AMOUNT	NO	NAME	HYPERION WIRE	TYPE	AMOUNT	NO	NAME	HYPERION WIRE	TYPE	AMOUNT
1	SOURCE TRANSFORMER	110V 1500VA		1	15	RECTIFIER SWITCHING FILTER COND	2.5V 2KV	PAPER	2	2									
2	"	110V 1500VA		1	16	"	2.5V 2KV	"	2	3									
3	LOW TENSION CHOKING COIL	30H 150AH		1	17	RESISTANCE FOR INDICATOR LAMP	2.5V 1KV	TYPE C	1	4									
4	"	30H 150AH		1	18	"	2.5V 1KV	"	1	5									
5	"	30H 150AH		1	19	"	2.5V 1KV	"	1	6									
6	RECTIFIER TUBE	50AH		1	20	"	2.5V 1KV	"	1	7									
7	CONSTANT VOLTAGE DIODE	50AH		1	21	HIGH FREQUENCY FILTER COIL	2.5V 1KV	"	1	8									
8	"	50AH		1	22	"	2.5V 1KV	"	1	9									
9	HIGH FREQUENCY FILTER COND.	2.5V 1KV		1	23	FUSE	2.5V 1KV	"	1	10									
10	"	2.5V 1KV		1	24	"	2.5V 1KV	"	1	11									
11	"	2.5V 1KV		1	25	INDICATOR LAMP	2.5V 1KV	"	1	12									
12	"	2.5V 1KV		1	26	SOURCE SWITCH	2.5V 1KV	"	1	13									
13	RECTIFIER SWITCHING FILTER COND.	2.5V 1KV		1	27	"	2.5V 1KV	"	1	14									
14	"	2.5V 1KV		1	28	"	2.5V 1KV	"	1	15									

Figure 9 (F)
RECEIVER POWER SUPPLY



SYMBOL	DESIGNATION	NUMBER	NOTES
1-1	3KVA GASOLINE ALTERNATING CURRENT GENERATOR	1	X
1-2	" " " " " "	1	"
2-1	3KVA GASOLINE ALTERNATING CURRENT GENERATOR	1	"
2-2	" " " " " "	1	"
3	DISTRIBUTOR	1	"
4	INDICATOR EQUIPMENT	1	"
5	RECEIVER	1	"
6	RECEIVER FOR RECTIFIER	1	"
7	TRANSMITTER & RECTIFIER	1	"
8	DISCHARGE TUBE FOR CATHODE	1	"
9	ELECTRIC LIGHTS	1	"
10-1	ANTENNA DISCHARGE	1	"
10-2	" RECHARGE	1	"
11	GROUND CONNECTION	1	"

CHART OF ELECTRIC WIRES

KIND	TYPE	NO.	QTY.	NO. & QTY.	PLACE	USE	TOTAL	NOTE
WIRE	"	16	25	1	2-1	3		
"	"	"	2	"	2-2	3		
"	"	"	3	"	2-3	3		
"	"	"	4	"	2-4	3		
"	"	"	5	"	2-5	3		
"	"	"	6	"	2-6	3		
"	"	"	7	"	2-7	3		
"	"	"	8	"	2-8	3		
"	"	"	9	"	2-9	3		
"	"	"	10	"	2-10	3		
"	"	"	11	"	2-11	3		
"	"	"	12	"	2-12	3		
"	"	"	13	"	2-13	3		
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"	"	"	19	"	2-19	3		
"	"	"	20	"	2-20	3		
"	"	"	21	"	2-21	3		
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"	"	"	23	"	2-23	3		
"	"	"	24	"	2-24	3		
"	"	"	25	"	2-25	3		
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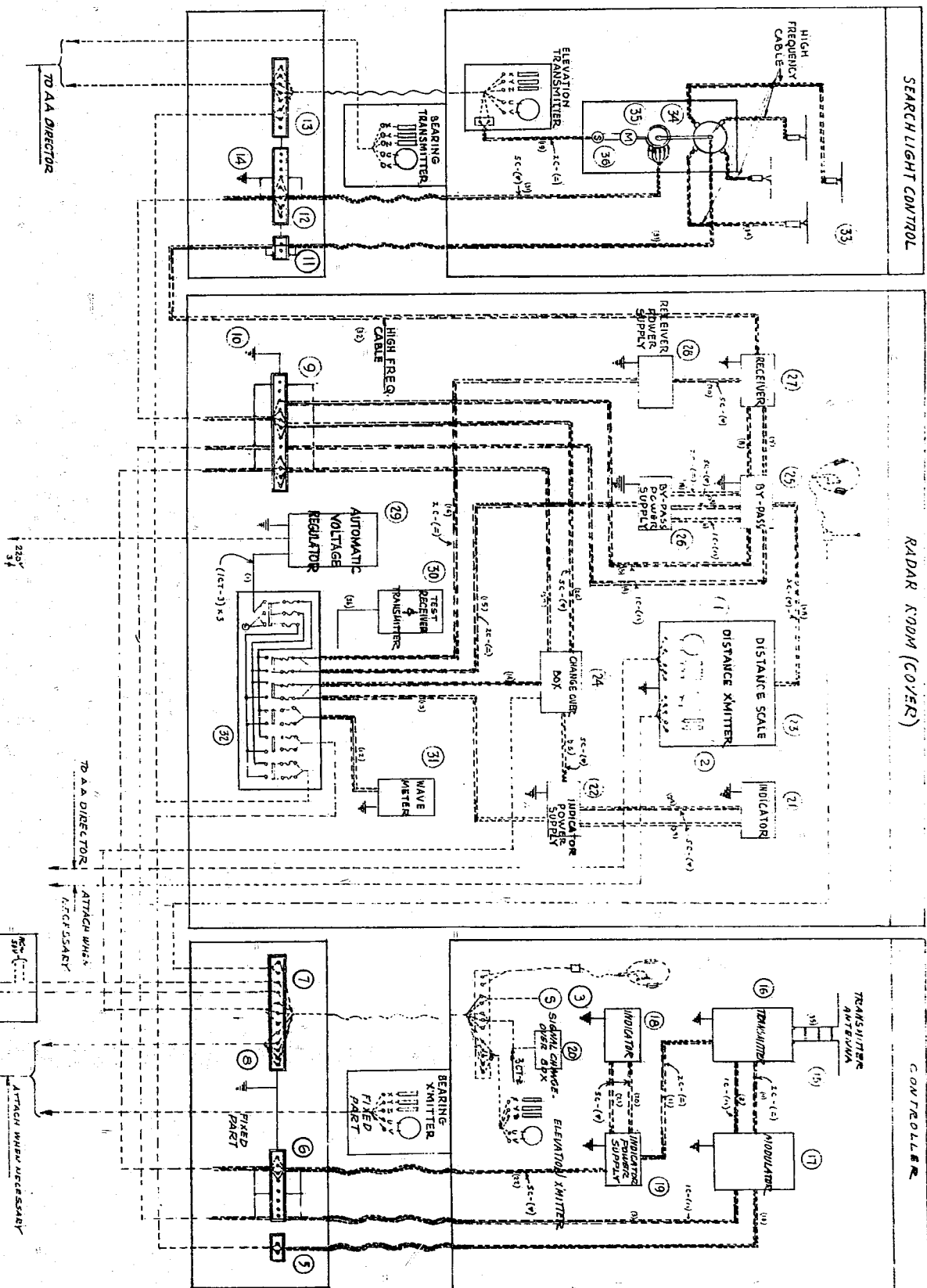
Figure 10(P)
BLOCK DIAGRAM

RESTRICTED

137.

ENCLOSURE (G)

E-03

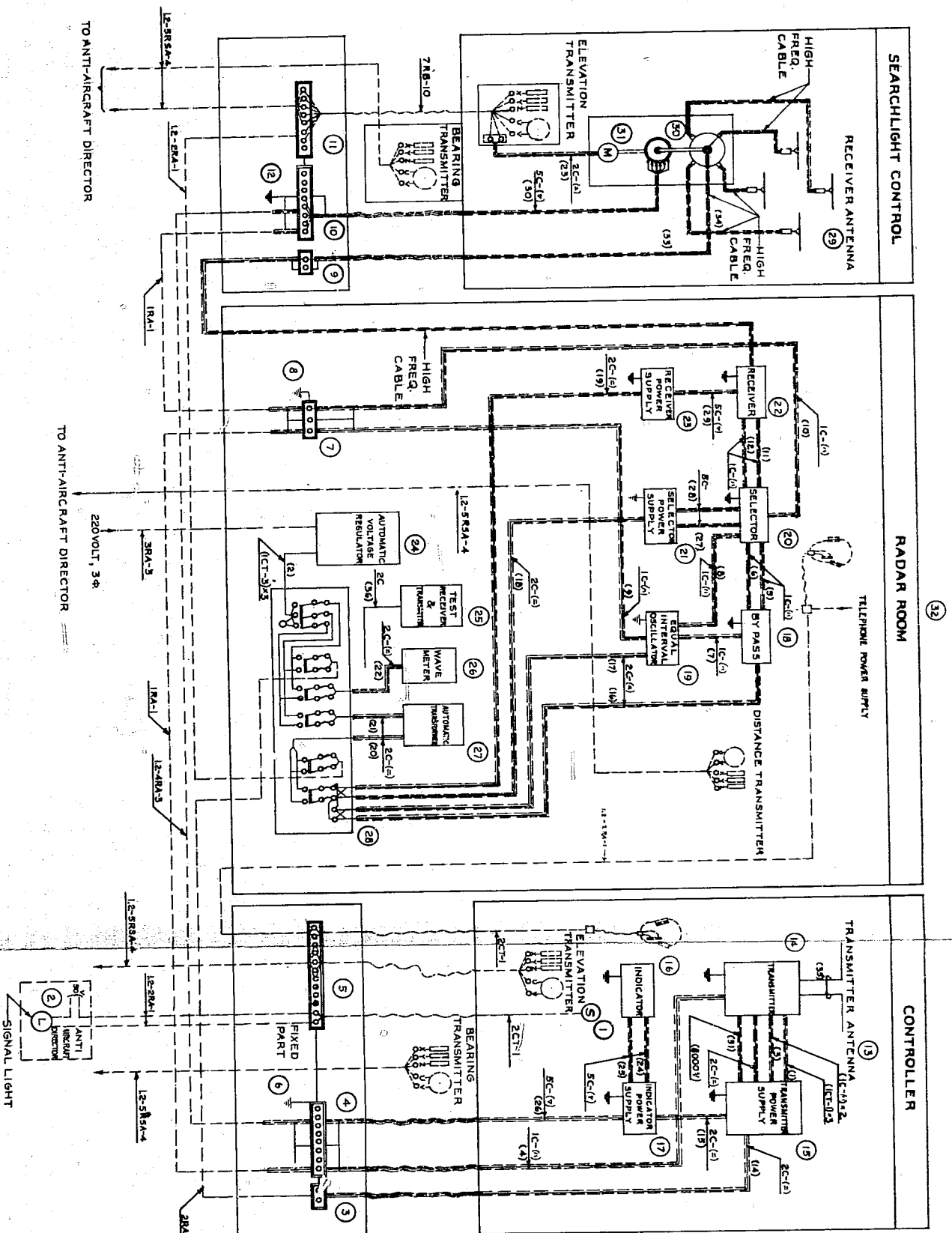


LIST OF ESSENTIAL PARTS			
NO	DESCRIPTION	QTY	REMARKS
1	DISTANCE XMITTER M22	1	MARK I MOD 2
2	STRONG	1	MOD DB
3	JUNCTION CIRCUIT BREAKER	1	REVOLVING TYPE
4	SIGNAL LIGHT	1	FOR SIGNALING
5	INTERMITTENT BOX	1	MOD I-2 TERM
6	TERMINAL BOX 2 TERM	1	5 TERM USED
7	STERN	1	12 " 4 0
8	GROUNDING BOARD	1	10 TERM USED
9	TERMINAL BOX 2 TERM	1	10 TERM USED
10	GROUNDING BOARD	1	10 TERM USED
11	TERMINAL BOX 2 TERM	1	10 TERM USED
12	12 " 4 0	1	10 TERM USED
13	GROUNDING BOARD	1	10 TERM USED
14	GROUNDING BOARD	1	10 TERM USED
15	TRANSMITTER ANTENNA	1	10 TERM USED
16	TRANSMITTER	1	10 TERM USED
17	REGULATOR	1	10 TERM USED
18	INDICATOR	1	10 TERM USED
19	INDICATOR PUR SUPPLY	1	10 TERM USED
20	SIGNAL CHANGEOVER BOX	1	10 TERM USED
21	INDICATOR	1	10 TERM USED

ESSENTIAL WIRE DISTRIBUTION

ESSENTIAL WIRE DIST			
No	TYPE	QUANTITY	TOTAL
1	100 ft. cable	15	15 METERS
2	100 ft. cable	15	15 METERS
3	100 ft. cable	15	15 METERS
4	100 ft. cable	15	15 METERS
5	100 ft. cable	15	15 METERS
6	100 ft. cable	15	15 METERS
7	100 ft. cable	15	15 METERS
8	100 ft. cable	15	15 METERS
9	100 ft. cable	15	15 METERS
10	100 ft. cable	15	15 METERS
11	100 ft. cable	15	15 METERS
12	100 ft. cable	15	15 METERS
13	100 ft. cable	15	15 METERS
14	100 ft. cable	15	15 METERS
15	100 ft. cable	15	15 METERS
16	100 ft. cable	15	15 METERS
17	100 ft. cable	15	15 METERS
18	100 ft. cable	15	15 METERS
19	100 ft. cable	15	15 METERS

Figure 1 (G)
EXTERNAL WIRING (MODIFICATION 1)



LIST OF ESSENTIAL PARTS			
NO.	NAME	QTY	REMARKS
1	CIRCUIT BREAKER (WATER)	1	
2	SIGNAL LIGHT	1	
3	FUNCTION BOX	1	
4	TERMINAL BOX (TERM)	1	TERMINALS USED
5	TERMINAL BOX (TERM)	1	TERMINALS USED
6	GROUNDING BOARD	1	
7	TERMINAL BOX (TERM)	1	TERMINALS USED
8	GROUNDING BOARD	1	
9	TERMINAL BOX (TERM)	1	TERMINALS USED
10	GROUNDING BOARD	1	
11	GROUNDING BOARD	1	
12	GROUNDING BOARD	1	
13	GROUNDING BOARD	1	
14	TRANSMITTER	1	
15	TRANSMITTER POWER SUPPLY	1	
16	INDICATOR	1	
17	INDICATOR POWER SUPPLY	1	
18	BY-PASS	1	
19	EQUAL INTERNAL OSCILLATOR	1	
20	SELECTOR	1	

LIST OF ESSENTIAL PARTS			
NO.	NAME	QTY	REMARKS
21	SELECTOR POWER SUPPLY	1	
22	RECEIVER	1	
23	RECEIVER POWER SUPPLY	1	
24	RECEIVER POWER SUPPLY	1	
25	TEST RECEIVER & TRANSMITTER	1	
26	WAVE METER	1	
27	WAVE METER	1	
28	WAVE METER	1	
29	RECEIVER ANTENNA	1	
30	PHASE RING	1	
31	STARTER FOR PHASE RING	1	
32	RADAR ROOM COVER	1	

LIST OF ESSENTIAL WIRING			
NO.	MODEL	TYPE	ARTICLE
(1)	IC-1	32	1
(2)	IC-1	32	1
(3)	IC-1	32	1
(4)	IC-1	32	1
(5)	IC-1	32	1
(6)	IC-1	32	1
(7)	IC-1	32	1
(8)	IC-1	32	1
(9)	IC-1	32	1
(10)	IC-1	32	1
(11)	IC-1	32	1
(12)	IC-1	32	1
(13)	IC-1	32	1
(14)	IC-1	32	1
(15)	IC-1	32	1
(16)	IC-1	32	1
(17)	IC-1	32	1
(18)	IC-1	32	1
(19)	IC-1	32	1
(20)	IC-1	32	1
(21)	IC-1	32	1
(22)	IC-1	32	1
(23)	IC-1	32	1

LIST OF ESSENTIAL WIRING			
NO.	MODEL	TYPE	ARTICLE
(24)	IC-1	32	1
(25)	IC-1	32	1
(26)	IC-1	32	1
(27)	IC-1	32	1
(28)	IC-1	32	1
(29)	IC-1	32	1
(30)	IC-1	32	1
(31)	IC-1	32	1
(32)	IC-1	32	1

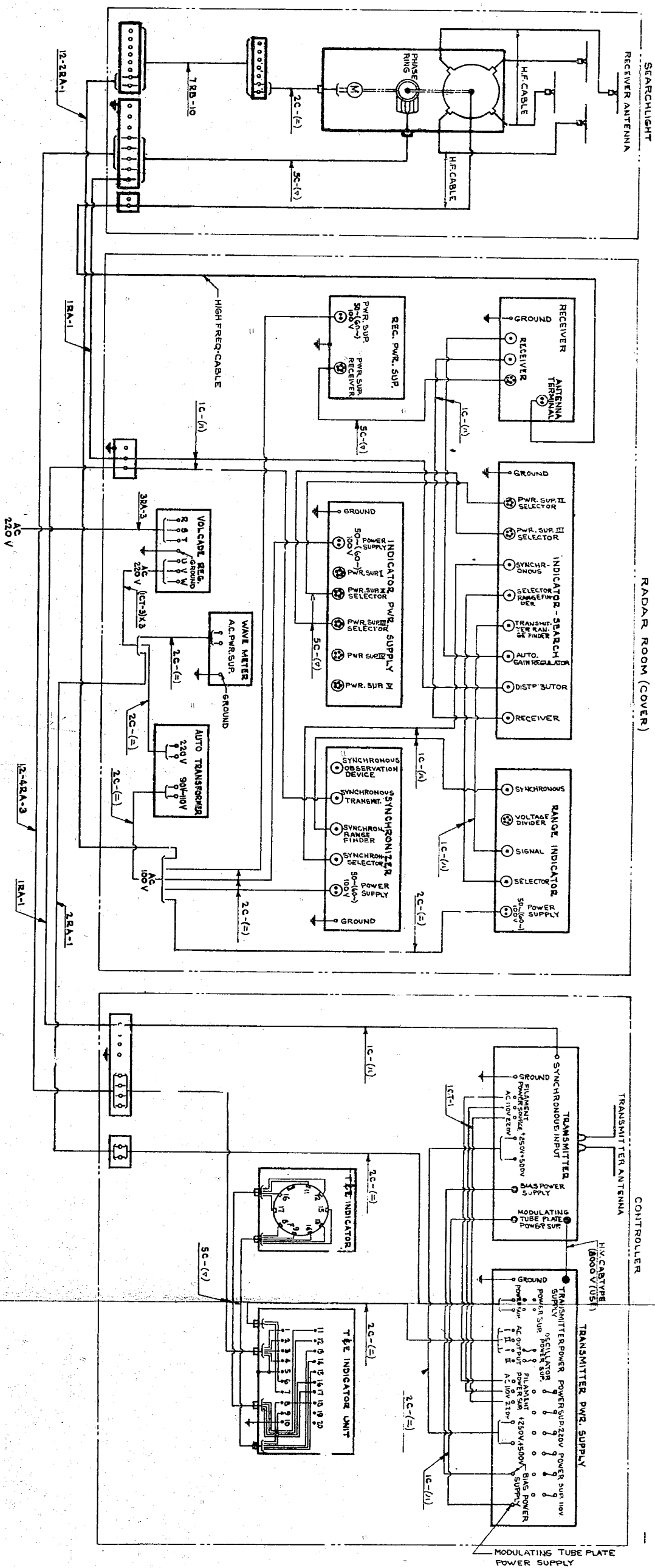


Figure 3(G)
INTERCONNECTION DIAGRAM

ENCLOSURE (G), continued

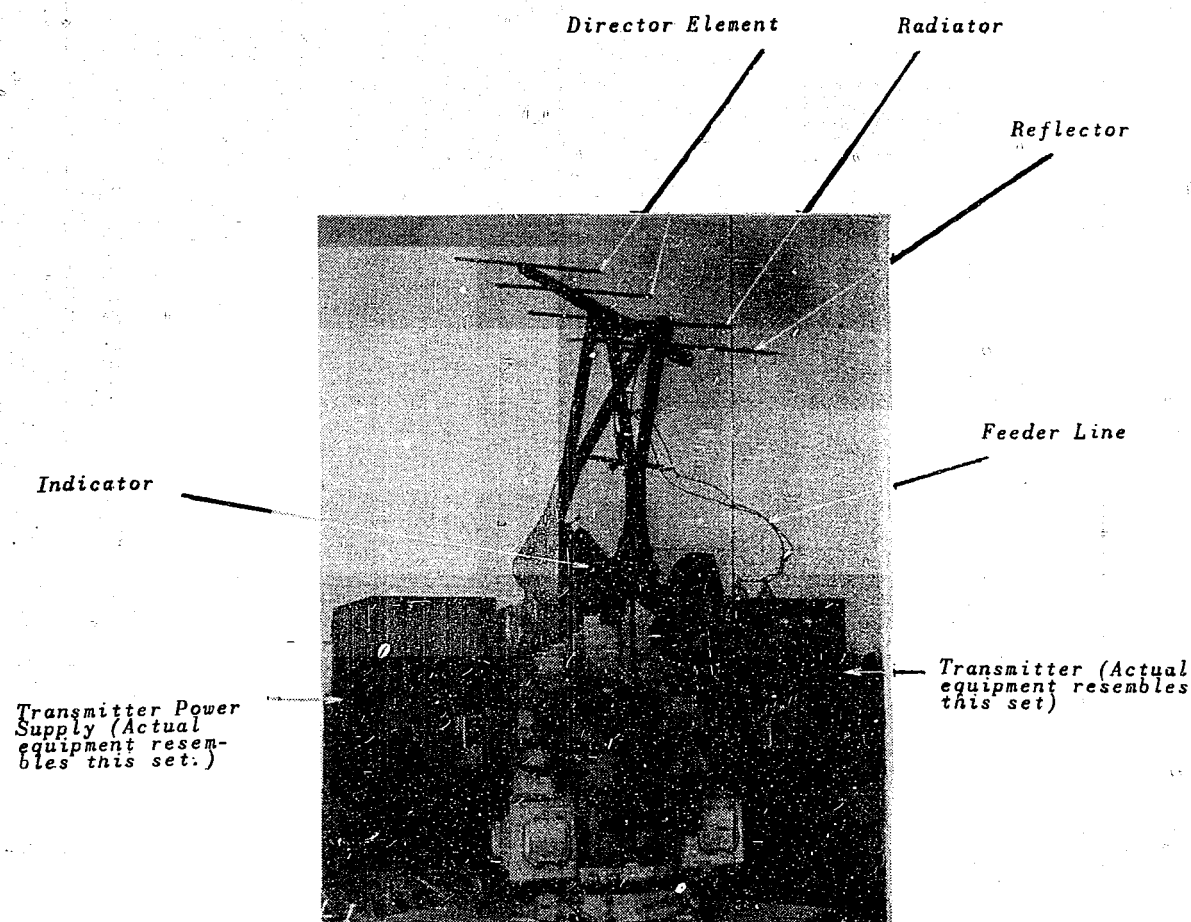


Figure 4(G)
TRANSMITTER AND INDICATOR UNIT
GENERAL APPEARANCE

ENCLOSURE (G), continued

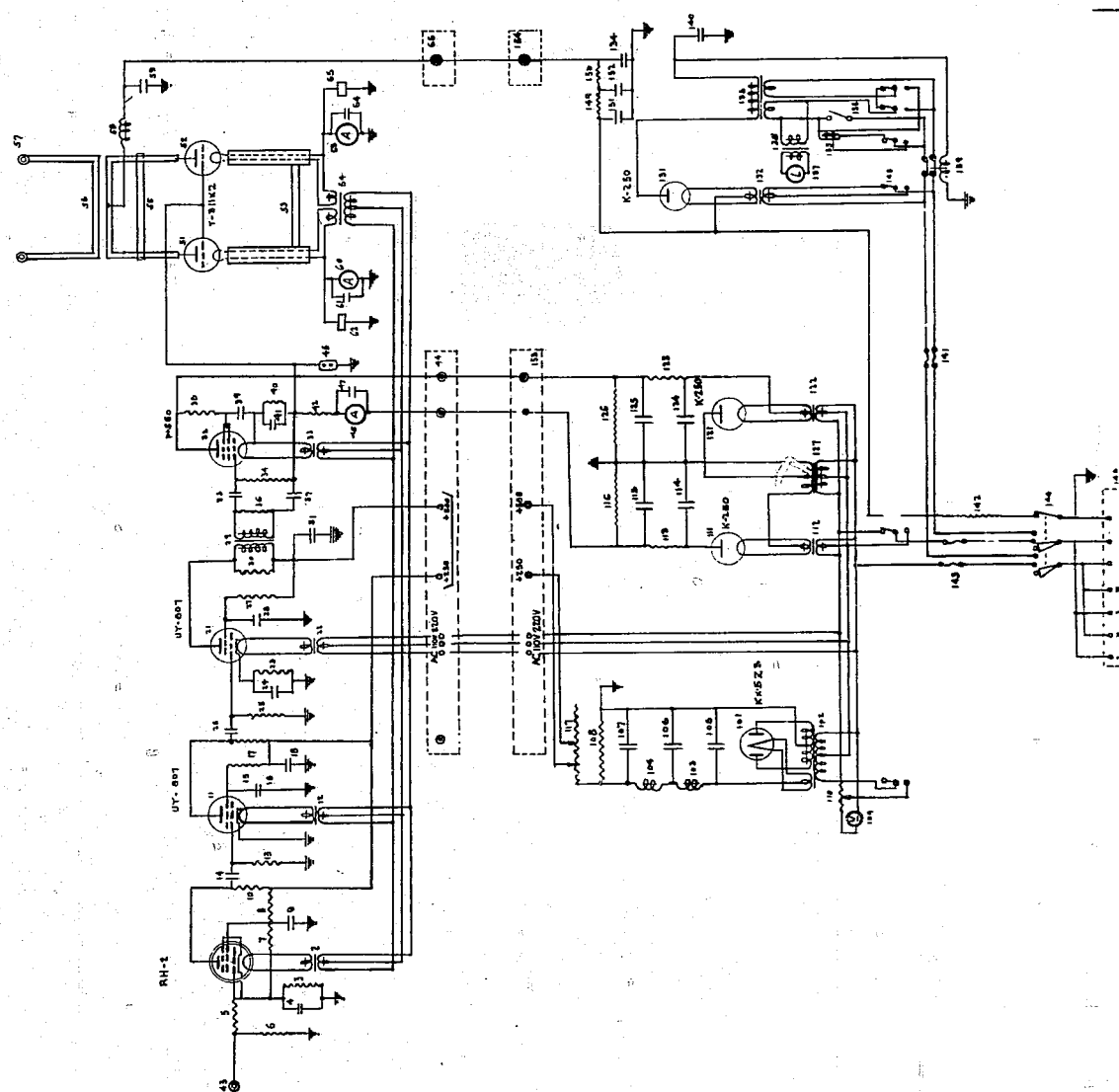
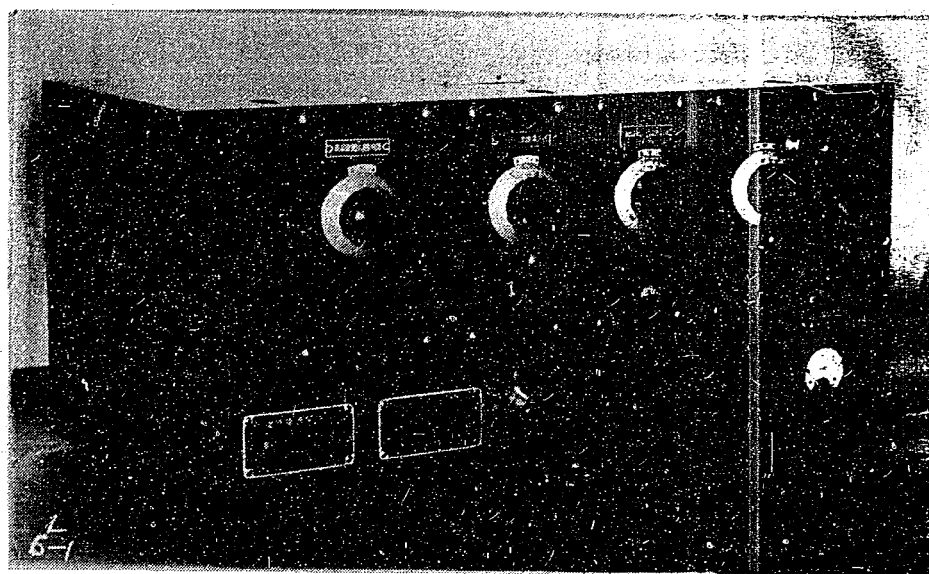
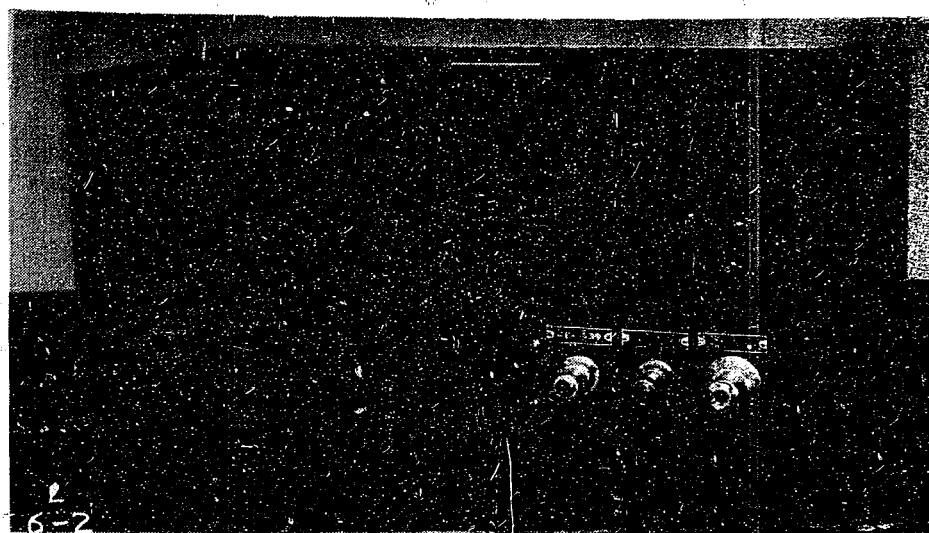


Figure 5(G)
TRANSMITTER

ENCLOSURE (G), continued



Front View



Rear View

Figure 6(G)
RECEIVER

RESTRICTED

ENCLOSURE (G), continued

E-03

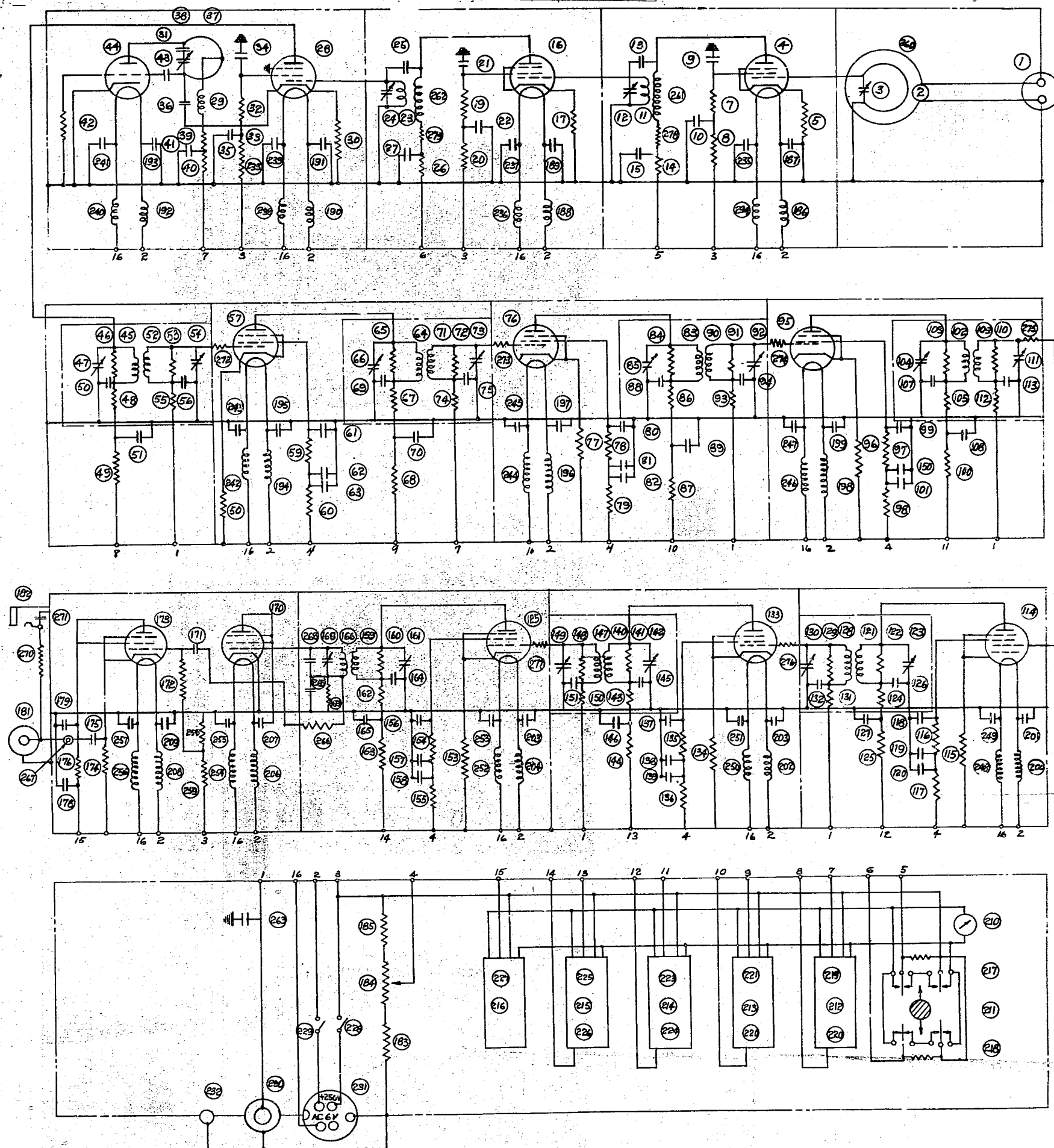
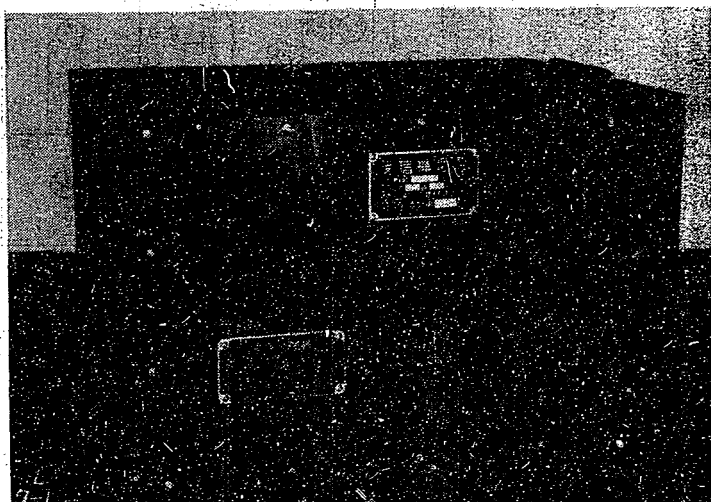


Figure 7(G)
RECEIVER

ENCLOSURE (G), continued



Front View



Rear View

Figure 8(G)
RECEIVER POWER SUPPLY PHOTO

ENCLOSURE (G), continued

NO.	NAME	NUMERICAL VALUE	TYPE	NO. OF PINS	NOTES
1	A.C. POWER SUPPLY JUNCTION PLUG/RECEPTACLE				
2	POWER SUPPLY SWITCH				
3	POWER SUPPLY FUSE	2A.	ACME		
4	POWER SUPPLY FUSE	2 A.	ACME		
5					
6					
7	PLATE POWER TRANSFORMER		700-9072		
8	FLUORESCENT POWER SUPPLY TRANSFORMER		500-1044		
9	RECTIFIER(RECEIVER)		100-115		
10					
11	RECTIFYING POWER SUPPLY FILTER GENERATOR	8 H.F.	100-8020		
12	RECTIFYING POWER SUPPLY FILTER GENERATOR	8 H.F.	100-8020	2	IN A ROW
13	RECTIFYING POWER SUPPLY FILTER CHOKE COIL	10H-250A.	NR-2222		
14	RECTIFYING POWER SUPPLY FILTER CHOKE COIL	10H-250A.	NR-2222		
15	OUTPUT JUNCTION PLUG (RECEIVER)				
16	RHEO STAT	0.5A.	NA-1	4	SERIES
17	RHEO STAT	0.5A.	NA-1	4	SERIES

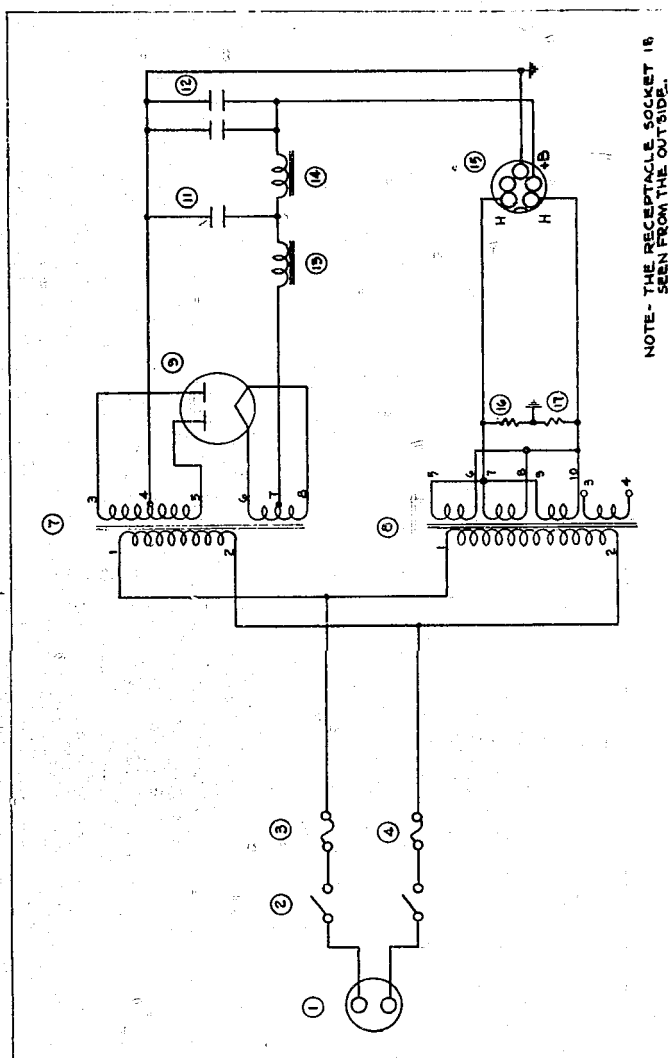
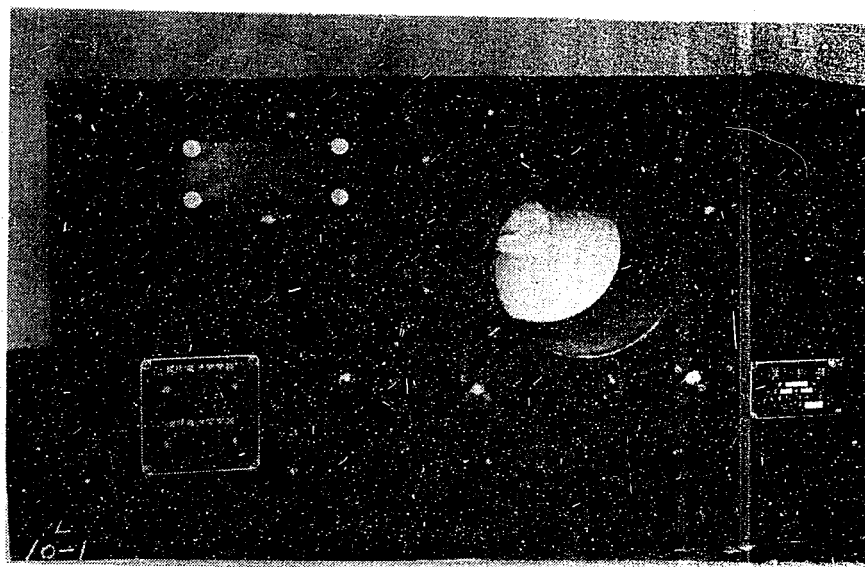
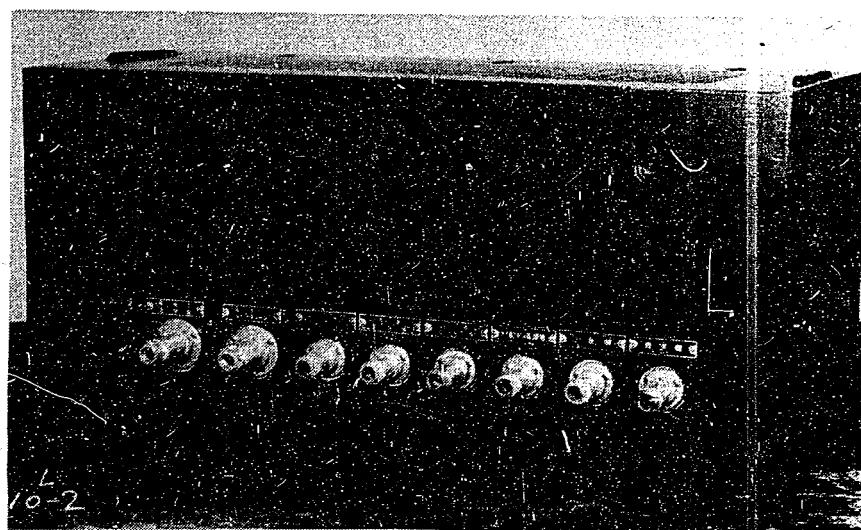


Figure 9 (G)
RECEIVER POWER SUPPLY

ENCLOSURE (G), continued



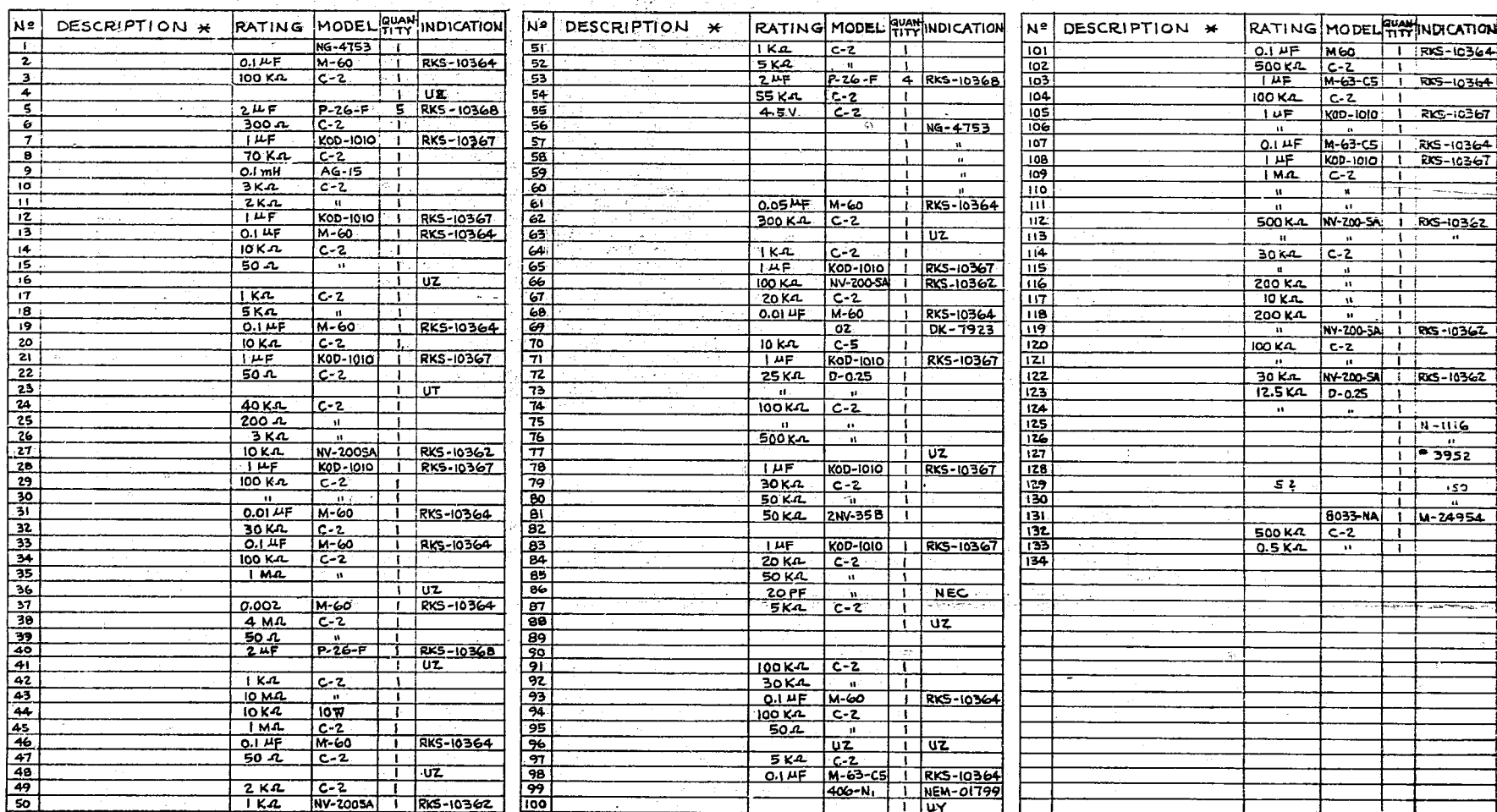
Front View



Rear View

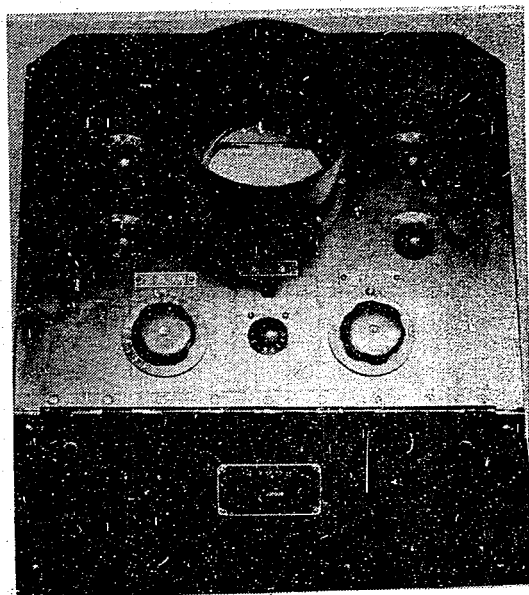
Figure 10(G)
INDICATOR SEARCH RANGE

E-03

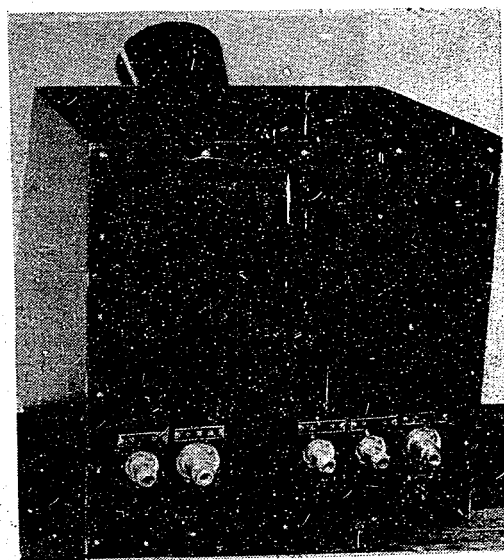


53

ENCLOSURE (G), continued

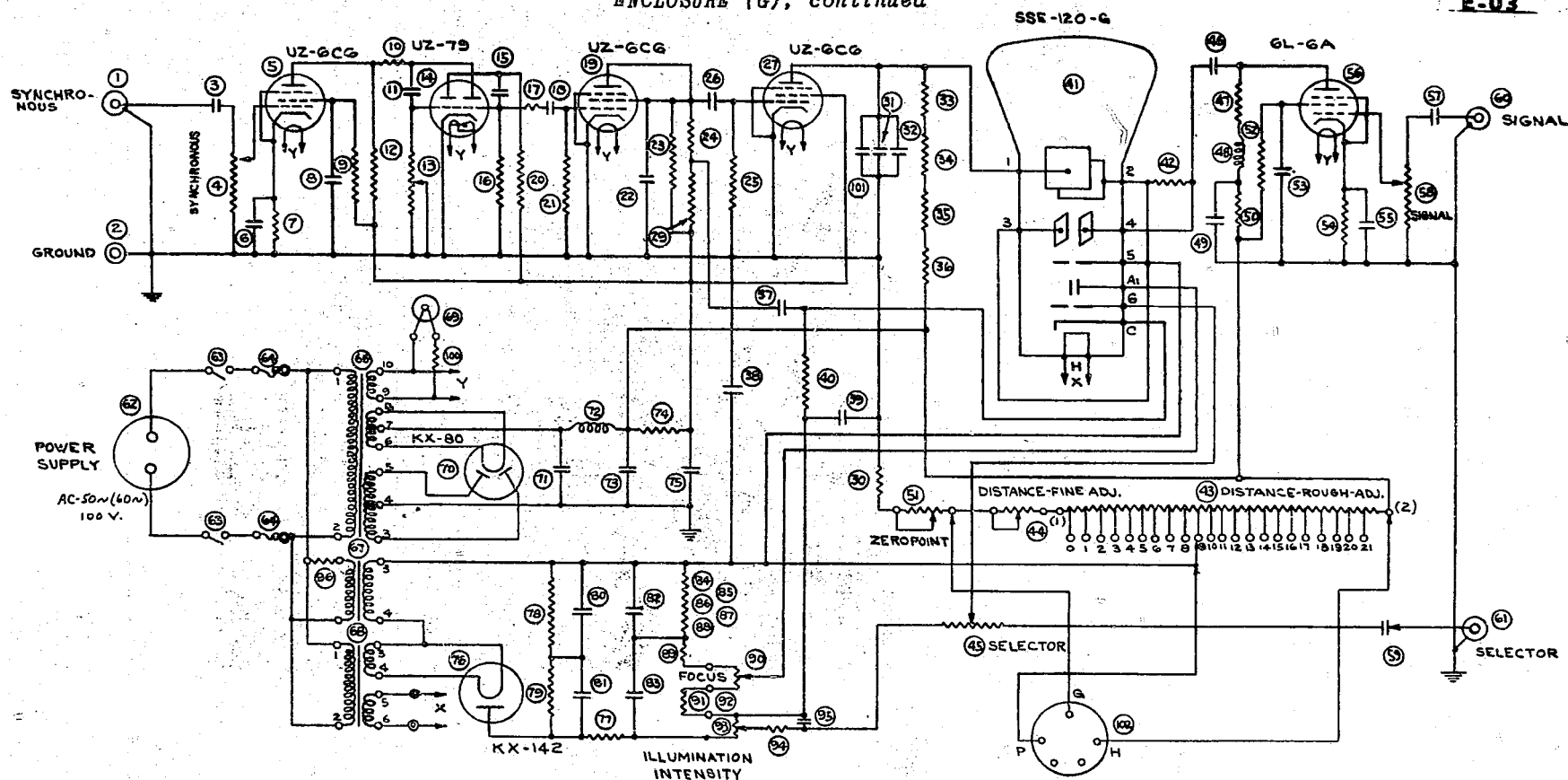


Front View



Rear View

Figure 12(G)
RANGE INDICATOR



NO.	DESCRIPTION	RATING	MODEL	INDICATION
1			NG-4753	NG-4753
2			8033-NA	M-24954
3		0.05MF	M-60	RKS-10364
4		500K.Ω	NV-200-1A	
5			UX	UZ
6		2MF	P-26-F	RKS-10368
7		7K.Ω	C-2	
8		0.5MF	KOD-510	RKS-10367
9		100K.Ω	C-2	
10		20K.Ω	"	
11		0.003MF	M-60	RKS-10364
12		2K.Ω	C-2	
13		500K.Ω	NV-200-5A	RKS-10362
14			UX	UZ
15		0.003MF	M-60	RKS-10364
16		300K.Ω	C-2	
17		20K.Ω	"	
18		0.05MF	M-60	RKS-10364
19			UX	UZ
20		20 K.Ω	C-2	
21		300 K.Ω	"	
22		0.5 MF	KOD-510	RKS-10367
23		200 K.Ω	C-2	
24		20 K.Ω	"	
25		300 K.Ω	"	
26		0.005MF	M-60	RKS-10364
27			UX	UZ
28				
29		10 K.Ω	C-2	
30		5 K.Ω	"	
31		600 PF	CA-1177-D	NG-4768
32		100 PF	NG-4602	
33		18K.Ω ± 4%	803-BE	DK-8003
34		"	"	"
35		"	"	"
36		"	"	"
37		0.1 MF	M-63-C5	
38		1+2X2 MF	KOD-100	RKS-10367
39		0.1 MF	M-63-C5	
40		100 K.Ω	C-2	
41			UX	UY
42		100 K.Ω	C-2	
43		800		DR-1672
44			QB11-D	NK-15069
45		150 K.Ω	NV-200-5A	RKS-10362
46		0.05MF	M-60	RKS-10364
47		3 K.Ω	C-3	
48		0.25MH	AE-14	
49		0.3 MF	KOD-510	RKS-10367
50		5 K.Ω	C-3	
51		2 K.Ω	NV-200-5A	RKS-10367
52		50 K.Ω	C-2	
53		0.3 MF	KOD-510	RKS-10367
54		400 .Ω	C-2	
55		10X2 MF	P-26-F	RKS-10368

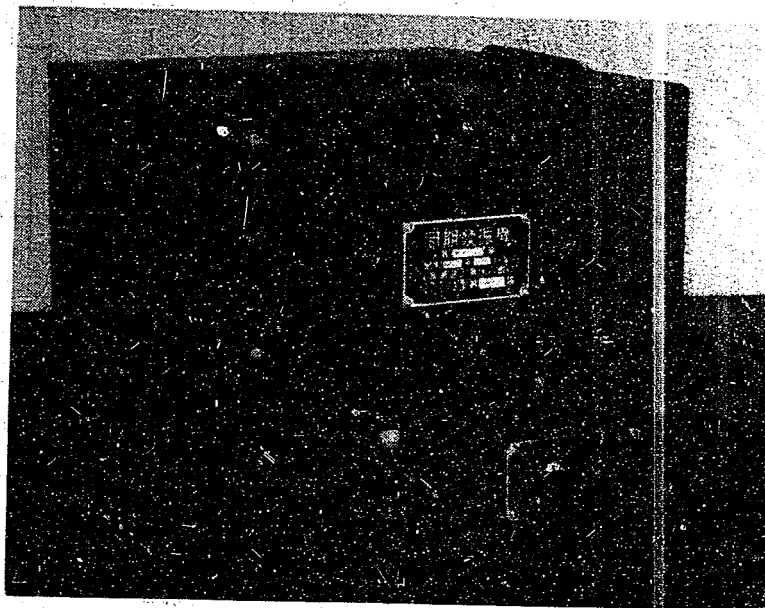
NOTE: UNTRANSLATED AS STANDARD
ELECTRICAL SYMBOLS ARE USED
X NAKAYAMA # 100

NO.	DESCRIPTION	RATING	MODEL	INDICATION
56			UX	UZ
57		0.05 MF	M-60	RKS-10364
58		150 K.Ω	NV-200-1A	RKS-10362
59		0.1 MF	M-63-C5	
60			NG-4753	NG-4753
61			"	"
62			#150	
63			SUGUI 3932	
64			KAWA Model 7	N-1116
65			"	"
66			500-SU-56	DK-7841
67			502-SU-26	DK-7869
68			502-SU-17	DK-7541
69				NG-4031
70			UX	UX
71		4 MF	KOD-4010	RKS-10367
72		30 H	420-58-16	DK-7844
73		4 MF	KOD-4010	RKS-10367
74		50 K.Ω	C-2	
75		4 MF	KOD-4010	RKS-10367
76			UX	UX
77		500 K.Ω	C-2	
78		5 m.Ω	D-2	
79		"	"	
80		0.5 MF	KOD-540	RKS-10367
81		"	"	"
82		"	"	"
83		"	"	"
84		500 K.Ω	C-2	"
85		"	"	"
86		"	"	"
87		"	"	"
88		"	"	"
89		"	"	"
90		"	NV-200-5A	RKS-10362
91		"	C-2	
92		"	"	
93		"	NV-200-5A	RKS-10362
94		100 K.Ω	C-2	
95		0.1 MF	P-26-B	RKS-10363
96		250 K.Ω	C-3	
97		"	"	
98		"	"	
99		400 K.Ω	"	
100		20 K.Ω	"	
101		100 PF	76-K	
102			#150	

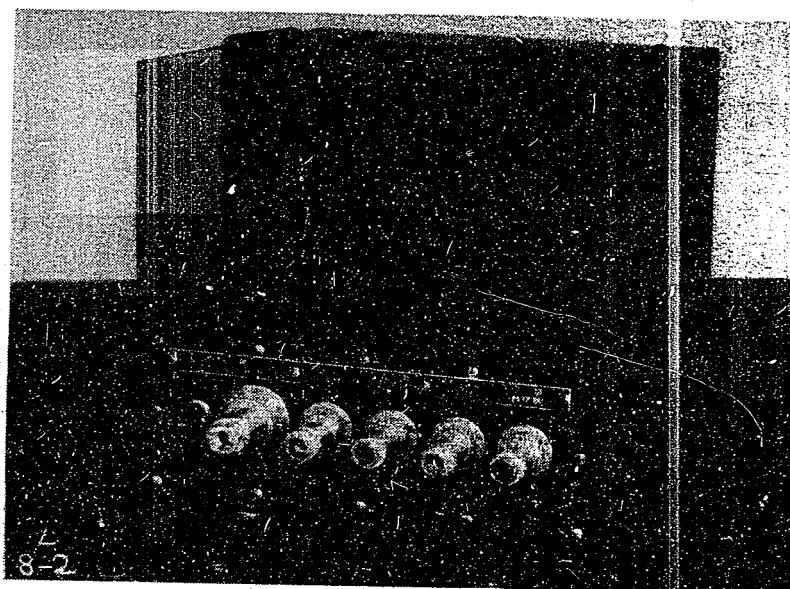
Figure 13(G)
INDICATOR RANGE

ENCL. F(12)

ENCLOSURE (G), continued



Front View



Rear View

Figure 14(G)
SYNCHRONIZER PHOTO

ENCLOSURE (G), continued

SYM.	DESCRIPTION	RATING	MODEL	MANUFACTURER
1	COAXIAL CABLE HEAD	Q1AF	M-62	NS-4753
2	MICA CONDENSOR	1K ²	C-2	RMS-10364
3	FIXED RESISTANCE	10K ²	C-2	RMS-10364
4	"	10K ²	C-2	RMS-10364
5	"	10K ²	C-2	RMS-10364
6	"	10K ²	C-2	RMS-10364
7	"	10K ²	C-2	RMS-10364
8	"	10K ²	C-2	RMS-10364
9	"	10K ²	C-2	RMS-10364
10	"	10K ²	C-2	RMS-10364
11	"	10K ²	C-2	RMS-10364
12	"	10K ²	C-2	RMS-10364
13	"	10K ²	C-2	RMS-10364
14	"	10K ²	C-2	RMS-10364
15	"	10K ²	C-2	RMS-10364
16	"	10K ²	C-2	RMS-10364
17	"	10K ²	C-2	RMS-10364
18	"	10K ²	C-2	RMS-10364
19	"	10K ²	C-2	RMS-10364
20	"	10K ²	C-2	RMS-10364
21	"	10K ²	C-2	RMS-10364
22	"	10K ²	C-2	RMS-10364
23	"	10K ²	C-2	RMS-10364
24	"	10K ²	C-2	RMS-10364
25	"	10K ²	C-2	RMS-10364
26	"	10K ²	C-2	RMS-10364
27	"	10K ²	C-2	RMS-10364
28	"	10K ²	C-2	RMS-10364
29	"	10K ²	C-2	RMS-10364
30	"	10K ²	C-2	RMS-10364
31	"	10K ²	C-2	RMS-10364
32	"	10K ²	C-2	RMS-10364
33	"	10K ²	C-2	RMS-10364
34	"	10K ²	C-2	RMS-10364
35	"	10K ²	C-2	RMS-10364
36	"	10K ²	C-2	RMS-10364
37	"	10K ²	C-2	RMS-10364
38	"	10K ²	C-2	RMS-10364
39	"	10K ²	C-2	RMS-10364
40	"	10K ²	C-2	RMS-10364
41	"	10K ²	C-2	RMS-10364
42	"	10K ²	C-2	RMS-10364
43	"	10K ²	C-2	RMS-10364
44	"	10K ²	C-2	RMS-10364
45	"	10K ²	C-2	RMS-10364
46	"	10K ²	C-2	RMS-10364
47	"	10K ²	C-2	RMS-10364
48	"	10K ²	C-2	RMS-10364
49	"	10K ²	C-2	RMS-10364
50	"	10K ²	C-2	RMS-10364

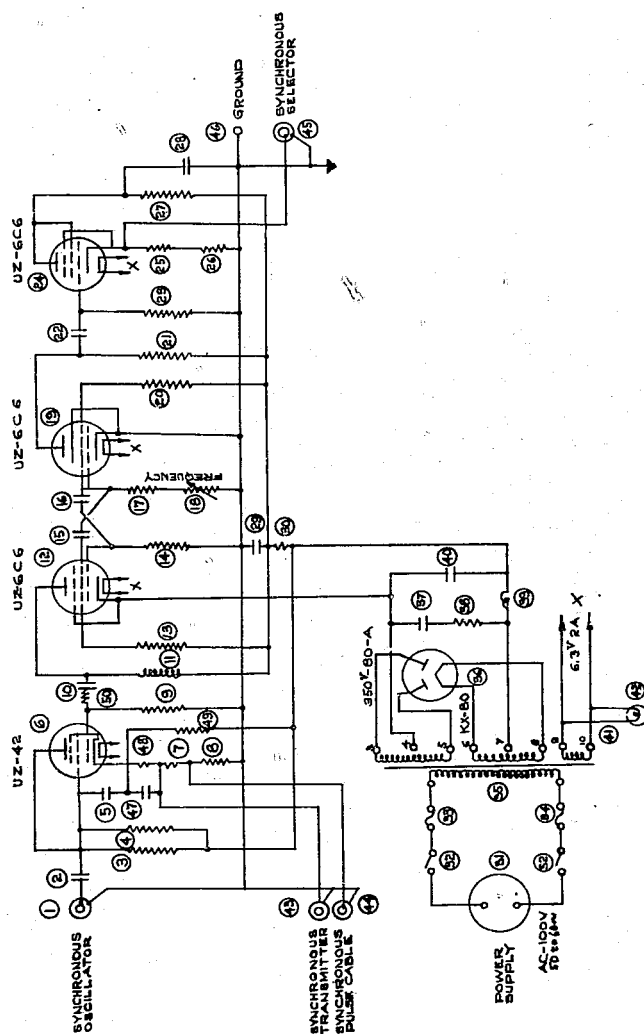
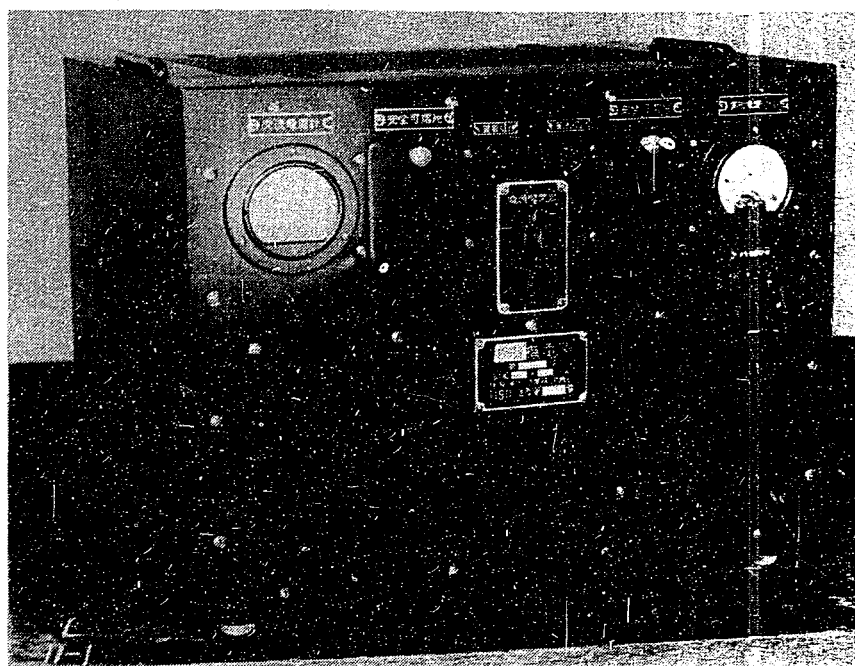
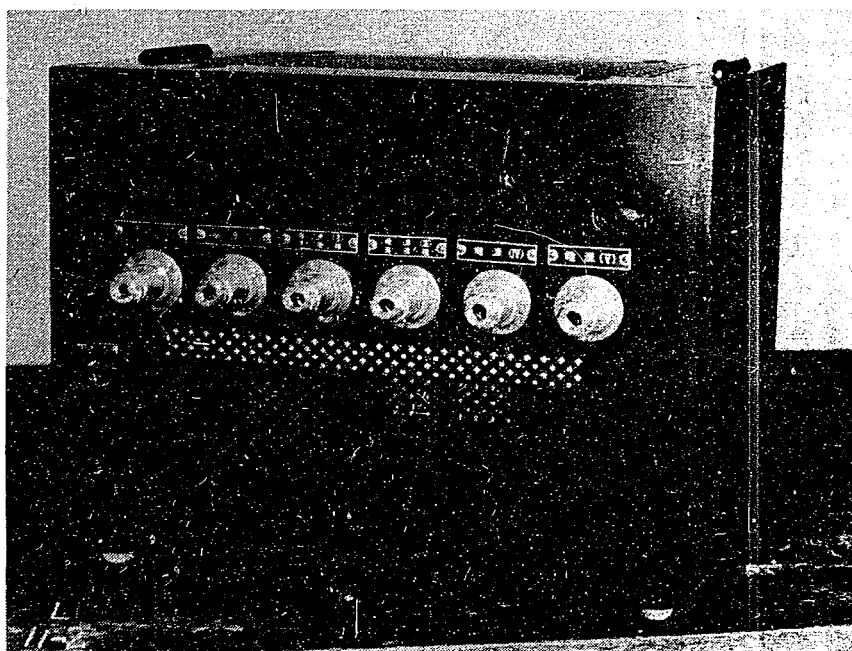


Figure 15(G)
SYNCHRONIZER

ENCLOSURE (G), continued*Front View**Rear View**Figure 16(G)*
INDICATOR POWER SUPPLY PHOTO

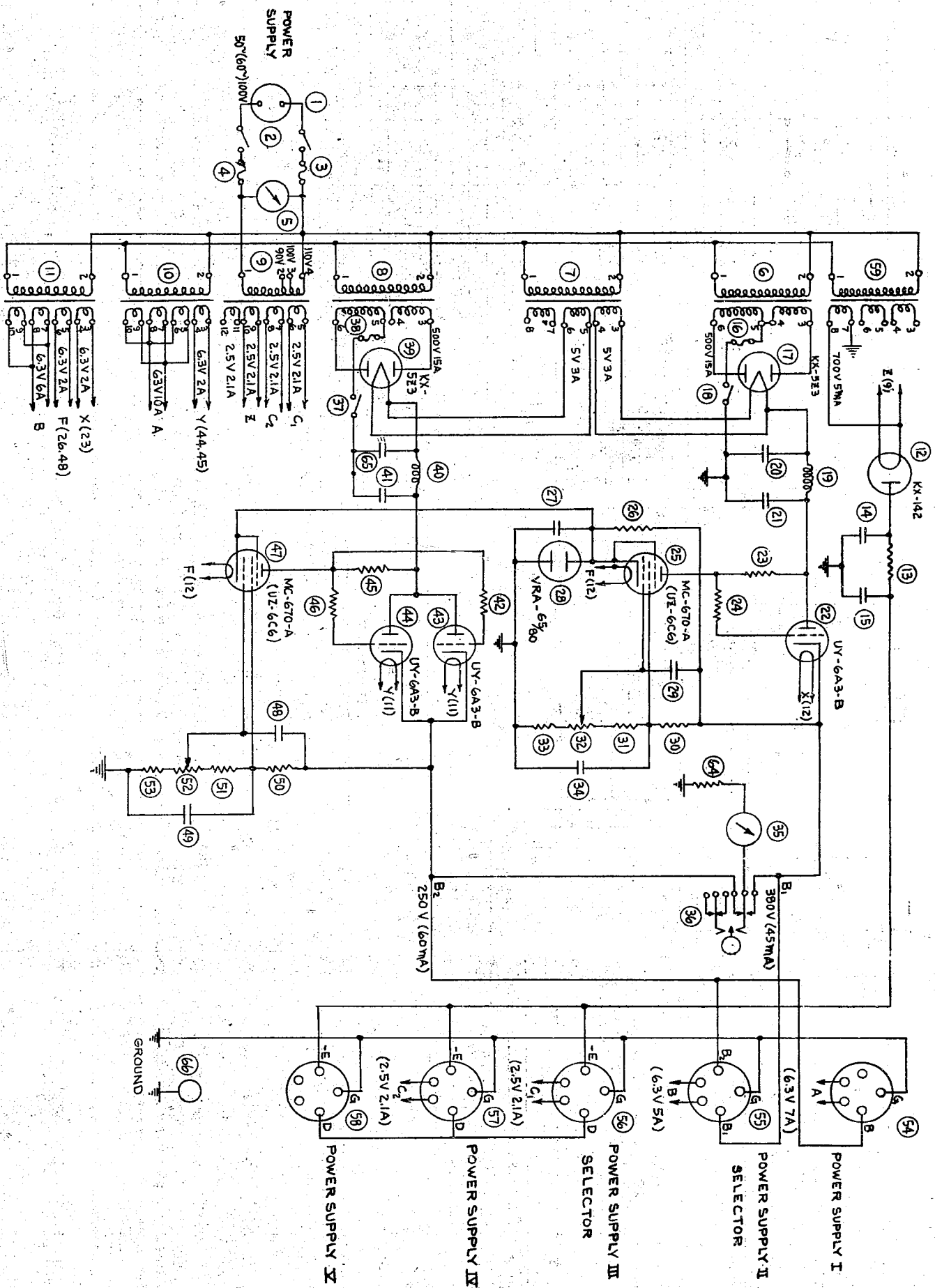
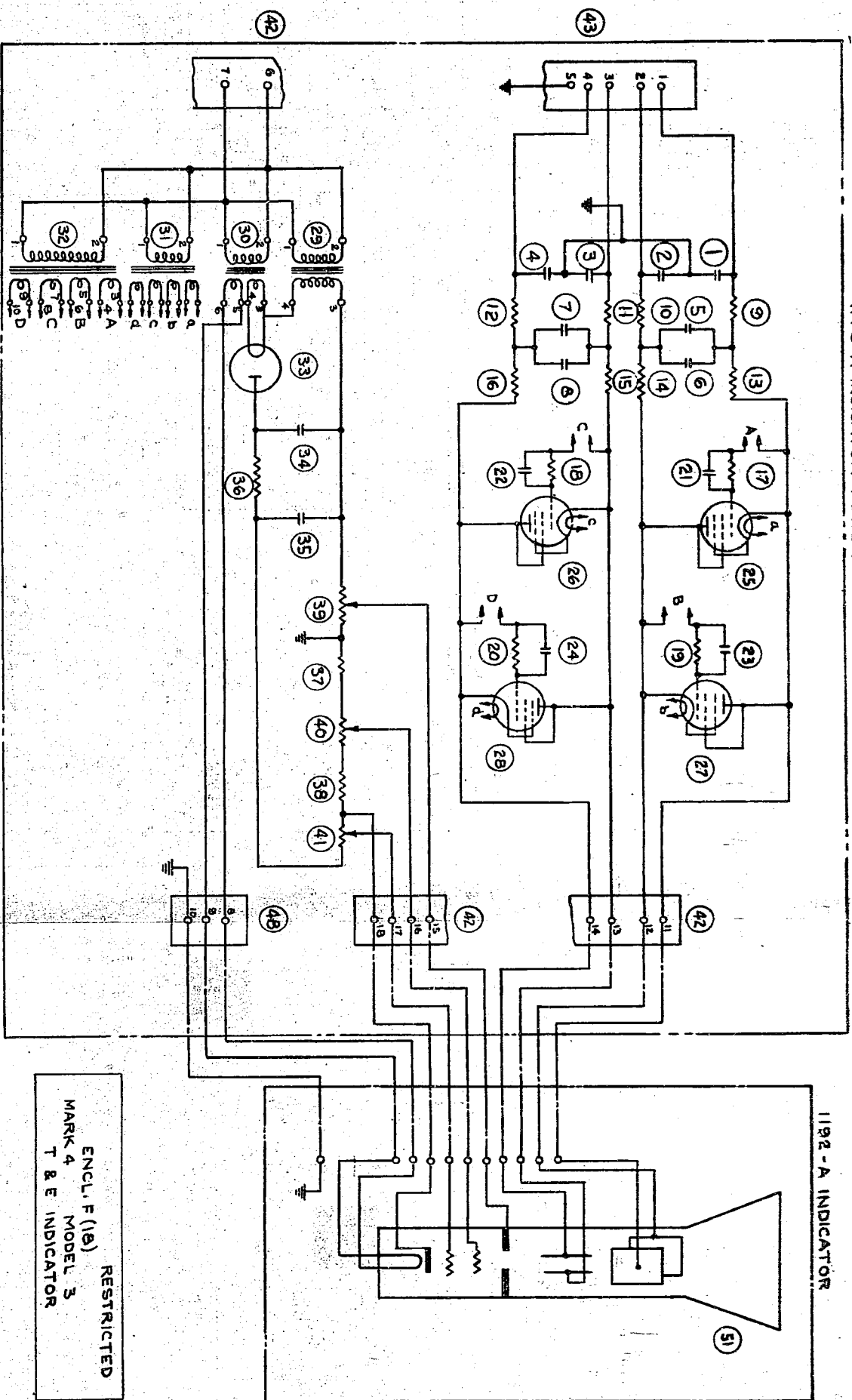


Figure 17 (G)
INDICATOR POWER SUPPLY

NO.	DESCRIPTION	RATING	TYPE	QUANTITY	INDICATION
1	NOTE: UNTRANSLATED				
2	RESCAUSE STANDARD				
3	ELECTRICAL SYMBOLS				
4	USED.				
5					
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66					



RESTRICTED
ENCL. F (18)
MODEL 3
T & E INDICATOR

NO.	DESCRIPTION	RATING	TYPE	QUAN.
1	CONDENSER FOR DISTRIBUTION	0.1 MF 1000V	M-60	1
2	VOL. LOAD	"	"	1
3	"	"	"	1
4	"	"	"	1
5	"	"	"	1
6	"	"	"	1
7	"	"	"	1
8	"	"	"	1
9	RESISTANCE	1 M.Ω	C-2	1
10	"	"	"	1
11	"	"	"	1
12	"	"	"	1
13	"	"	"	1
14	"	"	"	1
15	"	"	"	1
16	"	"	"	1
17	RESISTANCE	400 K.Ω	D-2	1
18	"	"	"	1
19	"	"	"	1
20	"	"	"	1
21	BY PASS CONDENSER	0.5 μF 1000V	KOD-520	1
22	"	"	"	1
23	"	"	"	1
24	"	"	"	1
25	VACUUM TUBE	"	U2-6C6	1
26	"	"	"	1
27	"	"	"	1
28	"	"	"	1
29	HIGH VOLTAGE POWER SUPPLY TRANSF.	"	"	1
30	TRANSFORMER	"	"	1
31	"	"	"	1
32	"	"	"	1
33	H.V. RECTIFIER TUBE	"	K-142	1
34	H.V. POWER SUPPLY CONDENSER	0.5 μF 4000V	KOD-540	1
35	"	"	"	1
36	RESISTANCE	500 K.Ω	C-2	1
37	"	"	"	1
38	GRADUATED RESISTANCE	500 K.Ω	"	2
39	VARIABLE COND. FOR H.V. ADJUST.	500 K.Ω	NV-35	1
40	"	"	"	1
41	"	100 K.Ω	"	1
42	TERMINAL PANEL	"	MT-6-10	1
43	"	"	"	1
51	CATHODE TUBE FOR SIGHT	"	B6-75-A	1

Figure 18(G)
T AND E INDICATOR

ENCLOSURE (G), continued

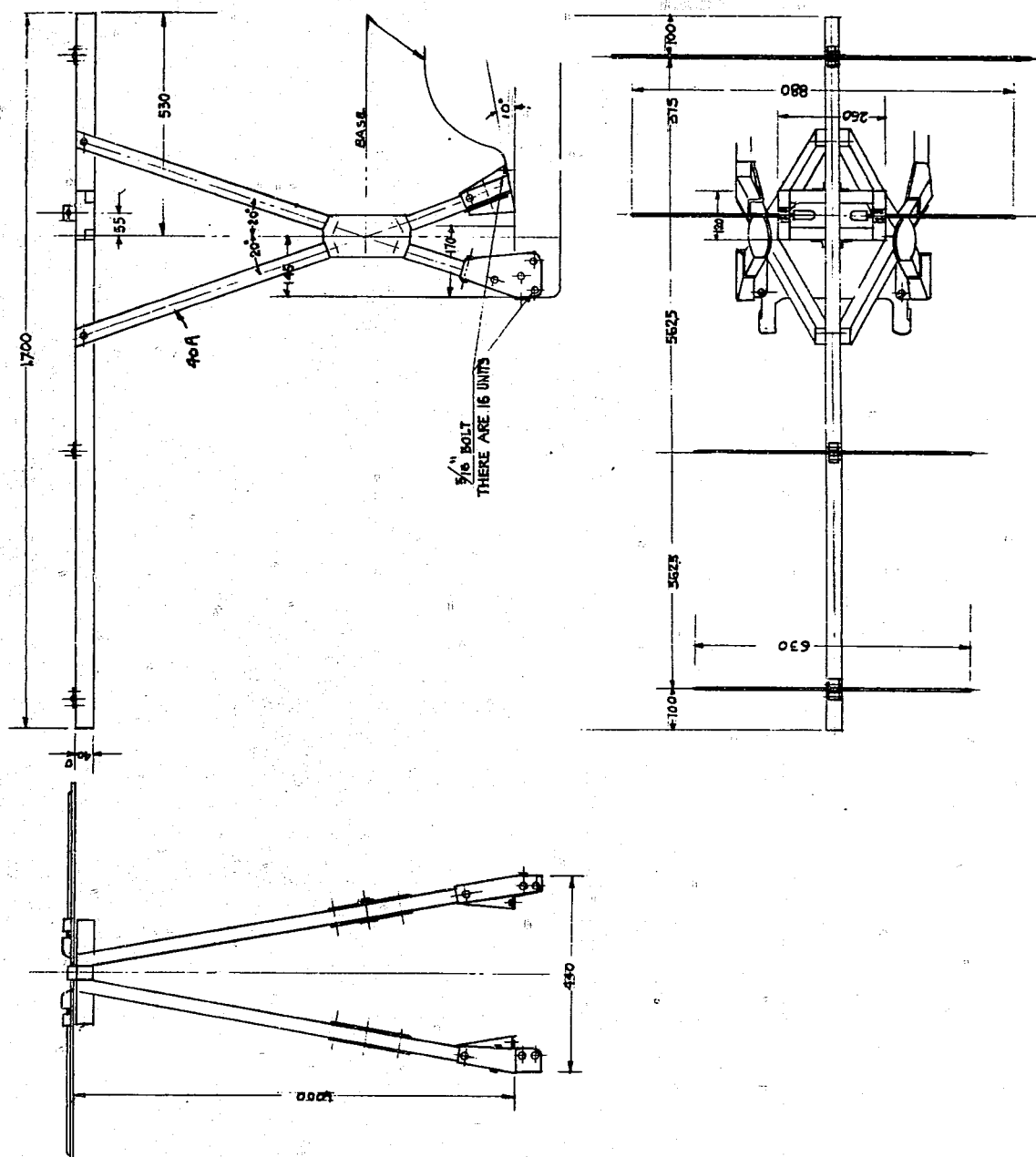


Figure 19(G)
ANTENNA - TRANSMITTER

ENCLOSURE (G), continued

Position in Which Phase
Ring Is Attached (In an
actual installation it
can be substituted in
place of A.)

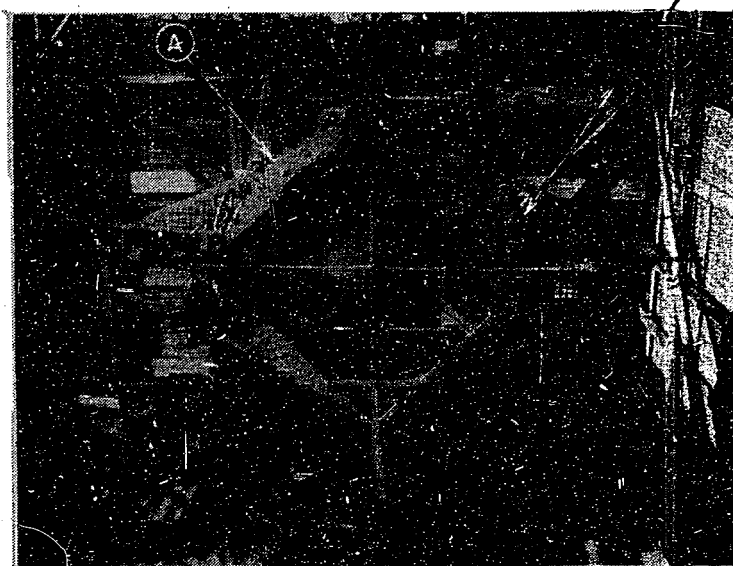


Figure 20 (G)
RECEIVING ANTENNA

ENCLOSURE (G), continued

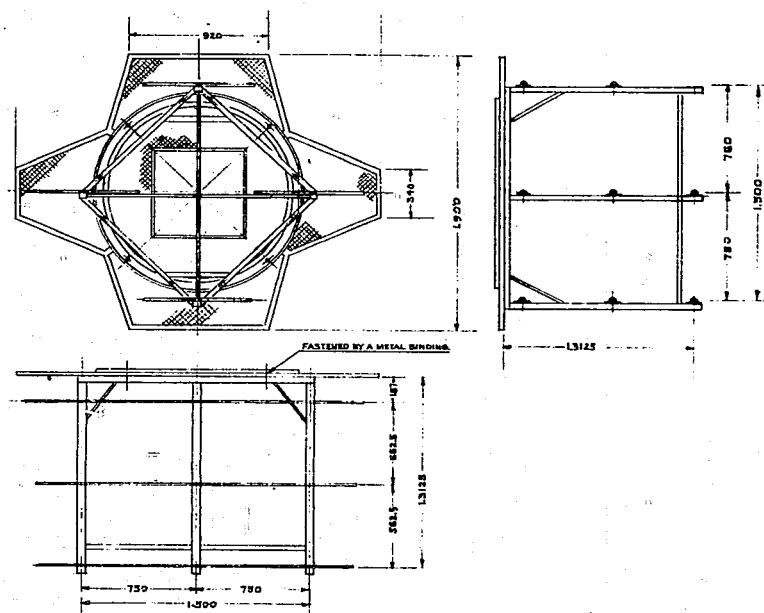


Figure 21(G)
RECEIVING ANTENNA

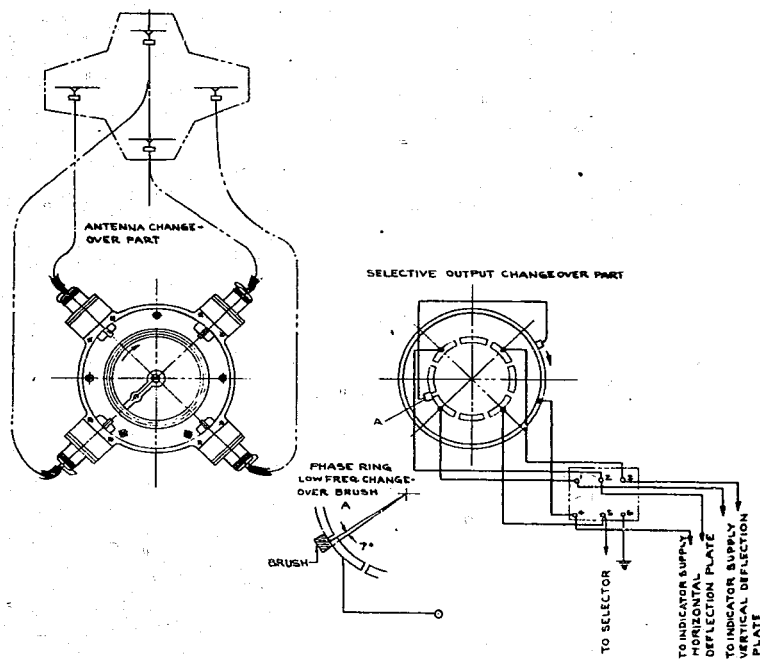
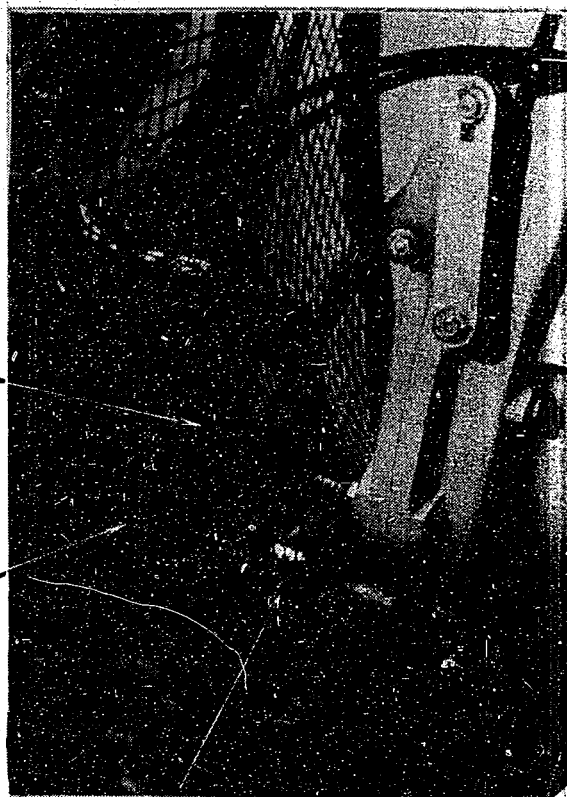


Figure 22(G)
RECEIVING ANTENNA LOBE SWITCHER

ENCLOSURE (G). continued

Impedance Matching
Unit (Installation
shown is impossible
The antenna points
downward, that is
opposite to what is
shown.)

High Frequency Cable



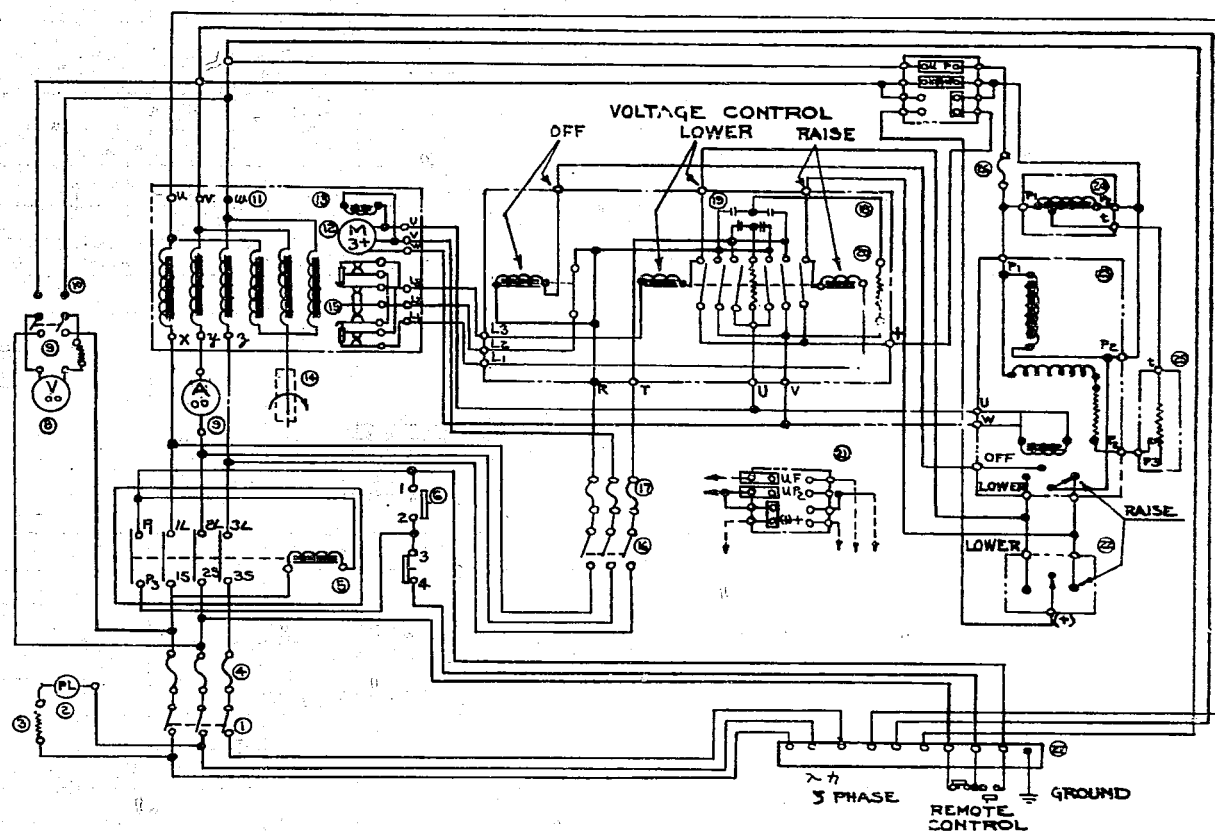
To Phasing Ring

Impedance Matching Unit

Figure 23(G)

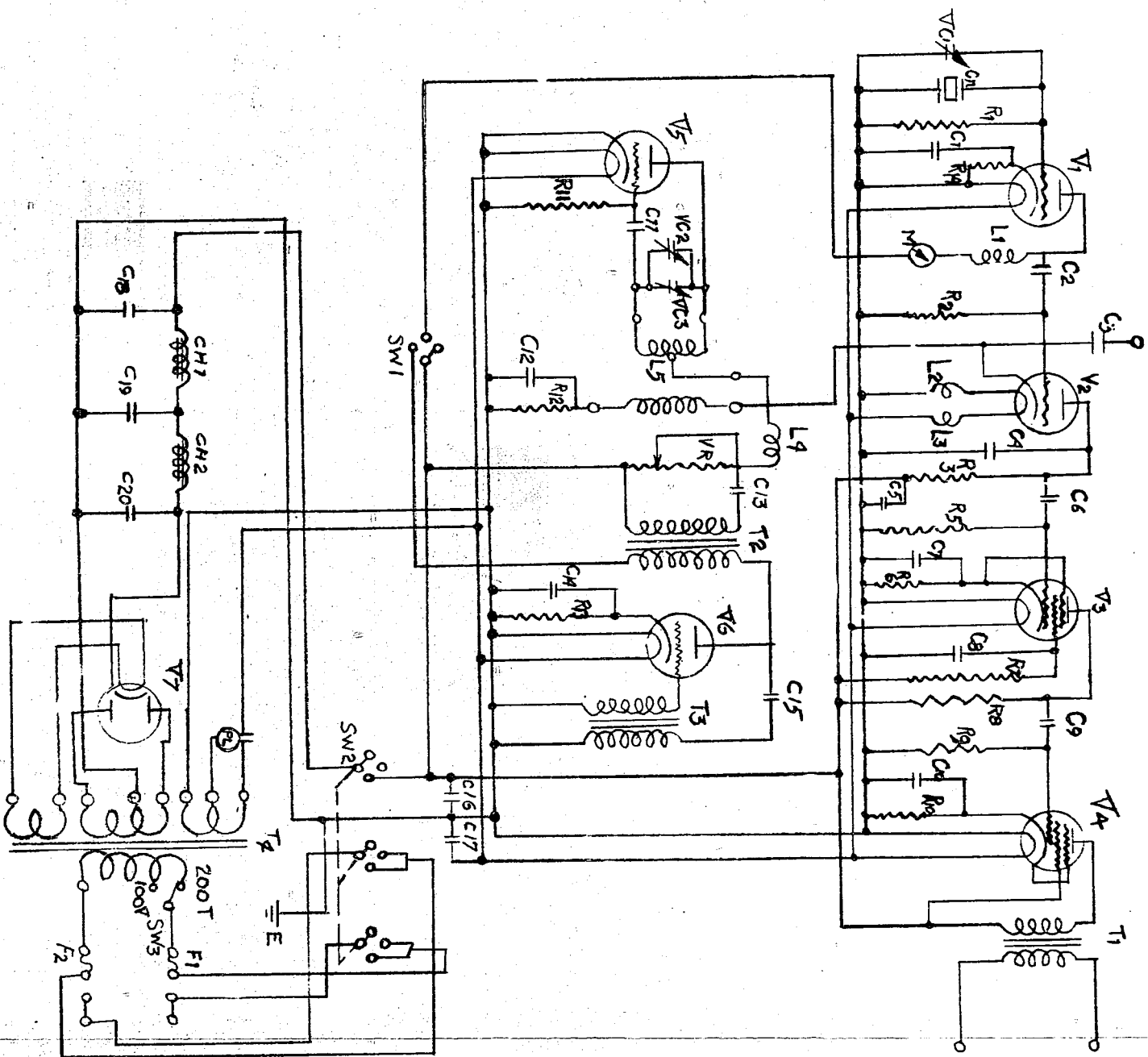
IMPEDANCE MATCHING UNIT DETAILS

ENCLOSURE (G), continued



NO.	NAME	NO.	NOTES	NO.	NAME	NO.	NOTES
1	PRINCIPAL POWER SUPPLY SWITCH.	1	250V 30A	15	LIMIT SWITCH FOR (11)	1	
2	POWER SUPPLY PILOT LIGHT.	1	B TYPE 20V ICP	16	POWER SUPPLY SWITCH FOR (12).	1	250V 5A
3	SERIES RHEOSTAT, SAME USE AS ABOVE.	1	2500 50-100	17	SAFETY FUSE	3	250V 3A
4	PRINCIPAL POWER SUPPLY SAFETY FUSE.	3	250V 25A	18	ELECTRO-MAGNETIC SWITCH TO CONTROL (12)	1	AVS ±
5	PRINCIPAL POWER SUPPLY MAGNETIC SWITCH	1	250V 30A	19	CONDENSER FOR PREVENTING ARC OF ABV. SWITCH	4	0.1-1.5 MF 200V
6	PUSH BUTTON SWITCH, SAME USE AS ABOVE.	1		20	CONDENSER FOR PREVENTING ARC IN RESISTOR	2	200V 5A-10
7	PRINCIPAL POWER SUPPLY AMMETER.	1	AC 25 A	21	AUTOMATIC & HAND OPERATED COMMUTATOR	1	
8	PRINCIPAL POWER SUPPLY VOLTMETER.	1	AC 300V	22	SWITCH FOR HAND OPERATED USE	1	
9	MULTIPLIER, SAME USE AS ABOVE.	1		23	AUTOMATIC VOLTAGE-ADJUSTOR CONDENSER	1	AMRY
10	PRINCIPAL POWER SUPPLY METER, SELECTOR SWITCH	1		24	TRANSFORMER FOR ABOVE	1	250V 115 VA
11	ILLEGIBLE.	1	3 1/2 KVA 210V	25	ADJUSTABLE RESISTANCE FOR ABOVE	1	12 Ω
12	CONTROL MOTOR, SAME AS ABOVE.	1	3 1/2 50W	26	FUSE FOR ABOVE	1	250V 1A
13	ELECTROMAGNETIC BRAKE, SAME AS ABOVE.	1		27	OUTPUT TERMINALS.	1	
14	CONTROL LEVER FOR (11).	1					

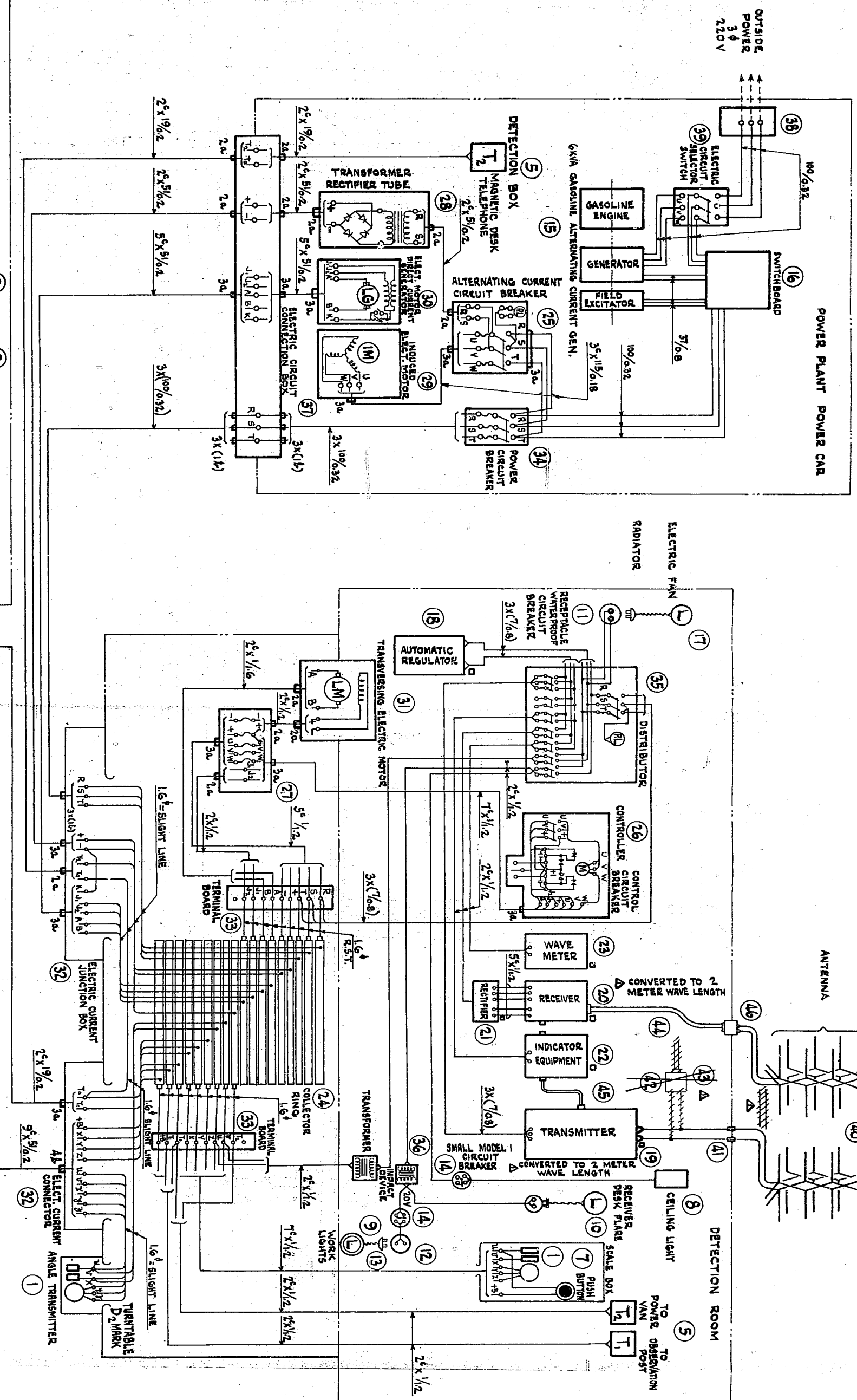
Figure 24(G)
VOLTAGE REGULATOR



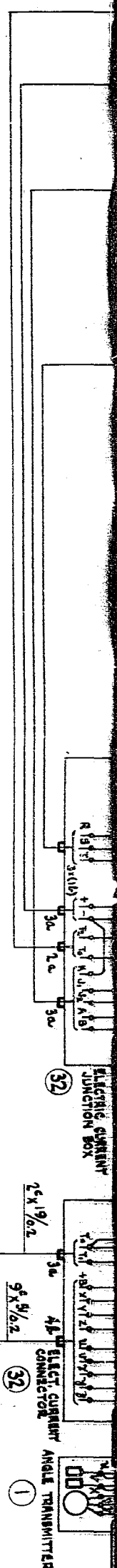
№.	NAME	NOTES	№.	NAME	NOTES
V1	UY-76		R8	HIGH RESIST. 200KΩ	RIKENOHM
V2	UN-955		R9	" " 500KΩ	" "
V3	UX-6C6		R10	" " 0.6KΩ	" "
V4	UY-384		R11	" " 100KΩ	" "
V5	UN-955		R12	" " 10KΩ	" "
V6	UY-176		R13	" " 0.6KΩ	" "
V7	ALL WAVE REC. KY-84		R14	" " 1KΩ	" "
VC1	CRYS. GRID COND.		L1	CRYS. PL. COIL	
VC2	FREQ. RELAY		L2	HI-FREQ. CHOKE COIL	
VC3	COMP. COND.		L3	" " " "	
C1	MICA COND. 0.002μF		L4	" " " "	
C2	"CHITAKON" 0.000005		L5	PLUG-IN COIL	
C3	"CHITAKON" 0.000002		T1	LO. PRES. OUT. TRAN. 1 = 1	5A F30 NIKON TSUSHIN
C4	"CHITAKON" 0.000005		T2	MOD. TRANSF'R. 1 = 1	
C5	MICA COND. 0.002μF		T3	OSC. TRANSF'R. 1 = 1	
C6	MICA COND. 0.002μF		T4	POW. SUP. TRANSF'R	
C7	PAPER COND. 0.1μF		CH1	SMOOTH. CHOKE 15H40MA	
C8	PAPER COND. 0.1μF		CH2	" " 15H40MA	
C9	MICA COND. 0.002μF		CH3	" " 15H40MA	
C10	PAPER COND. 0.5μF		CH4	" " 15H40MA	
C11	"CHITAKON" 0.0001		CH5	" " 15H40MA	
C12	"CHITAKON" 0.00005		CH6	" " 15H40MA	
C13	MICA COND. 0.002μF		CH7	" " 15H40MA	
C14	PAPER COND. 0.1μF		CH8	" " 15H40MA	
C15	PAPER COND. 0.1μF		CH9	" " 15H40MA	
C16	PAPER COND. 0.1μF		CH10	" " 15H40MA	
C17	PAPER COND. 0.1μF		CH11	" " 15H40MA	
C18	SMOOTH. COND. 8μF		CH12	" " 15H40MA	
C19	SMOOTH. COND. 8μF		CH13	" " 15H40MA	
C20	SMOOTH. COND. 4μF		CH14	" " 15H40MA	
VR	VAR. RHEOSTAT 10KΩ		CH15	" " 15H40MA	
T1	CRYS. GRID COND.		CH16	" " 15H40MA	
T2	FREQ. RELAY		CH17	" " 15H40MA	
T3	COMP. COND.		CH18	" " 15H40MA	
T4	ALL WAVE REC. KY-84		CH19	" " 15H40MA	
T5	UY-176		CH20	" " 15H40MA	
T6	UN-955		CH21	" " 15H40MA	
T7	UY-384		CH22	" " 15H40MA	
T8	UN-955		CH23	" " 15H40MA	
T9	UY-76		CH24	" " 15H40MA	
T10	UY-384		CH25	" " 15H40MA	
T11	UN-955		CH26	" " 15H40MA	
T12	UY-176		CH27	" " 15H40MA	
T13	UN-955		CH28	" " 15H40MA	
T14	UY-384		CH29	" " 15H40MA	
T15	UN-955		CH30	" " 15H40MA	
T16	UY-76		CH31	" " 15H40MA	
T17	UY-384		CH32	" " 15H40MA	
T18	UN-955		CH33	" " 15H40MA	
T19	UY-176		CH34	" " 15H40MA	
T20	UN-955		CH35	" " 15H40MA	
T21	UY-384		CH36	" " 15H40MA	
T22	UN-955		CH37	" " 15H40MA	
T23	UY-76		CH38	" " 15H40MA	
T24	UY-384		CH39	" " 15H40MA	
T25	UN-955		CH40	" " 15H40MA	
T26	UY-176		CH41	" " 15H40MA	
T27	UN-955		CH42	" " 15H40MA	
T28	UY-384		CH43	" " 15H40MA	
T29	UN-955		CH44	" " 15H40MA	
T30	UY-76		CH45	" " 15H40MA	
T31	UY-384		CH46	" " 15H40MA	
T32	UN-955		CH47	" " 15H40MA	
T33	UY-176		CH48	" " 15H40MA	
T34	UN-955		CH49	" " 15H40MA	
T35	UY-384		CH50	" " 15H40MA	
T36	UN-955		CH51	" " 15H40MA	
T37	UY-76		CH52	" " 15H40MA	
T38	UY-384		CH53	" " 15H40MA	
T39	UN-955		CH54	" " 15H40MA	
T40	UY-176		CH55	" " 15H40MA	
T41	UN-955		CH56	" " 15H40MA	
T42	UY-384		CH57	" " 15H40MA	
T43	UN-955		CH58	" " 15H40MA	
T44	UY-76		CH59	" " 15H40MA	
T45	UY-384		CH60	" " 15H40MA	
T46	UN-955		CH61	" " 15H40MA	
T47	UY-176		CH62	" " 15H40MA	
T48	UN-955		CH63	" " 15H40MA	
T49	UY-384		CH64	" " 15H40MA	
T50	UN-955		CH65	" " 15H40MA	
T51	UY-76		CH66	" " 15H40MA	
T52	UY-384		CH67	" " 15H40MA	
T53	UN-955		CH68	" " 15H40MA	
T54	UY-176		CH69	" " 15H40MA	
T55	UN-955		CH70	" " 15H40MA	
T56	UY-384		CH71	" " 15H40MA	
T57	UN-955		CH72	" " 15H40MA	
T58	UY-76		CH73	" " 15H40MA	
T59	UY-384		CH74	" " 15H40MA	
T60	UN-955		CH75	" " 15H40MA	
T61	UY-176		CH76	" " 15H40MA	
T62	UN-955		CH77	" " 15H40MA	
T63	UY-384		CH78	" " 15H40MA	
T64	UN-955		CH79	" " 15H40MA	
T65	UY-76		CH80	" " 15H40MA	
T66	UY-384		CH81	" " 15H40MA	
T67	UN-955		CH82	" " 15H40MA	
T68	UY-176		CH83	" " 15H40MA	
T69	UN-955		CH84	" " 15H40MA	
T70	UY-384		CH85	" " 15H40MA	
T71	UN-955		CH86	" " 15H40MA	
T72	UY-76		CH87	" " 15H40MA	
T73	UY-384		CH88	" " 15H40MA	
T74	UN-955		CH89	" " 15H40MA	
T75	UY-176		CH90	" " 15H40MA	
T76	UN-955		CH91	" " 15H40MA	
T77	UY-384		CH92	" " 15H40MA	
T78	UN-955		CH93	" " 15H40MA	
T79	UY-76		CH94	" " 15H40MA	
T80	UY-384		CH95	" " 15H40MA	
T81	UN-955		CH96	" " 15H40MA	
T82	UY-176		CH97	" " 15H40MA	
T83	UN-955		CH98	" " 15H40MA	
T84	UY-384		CH99	" " 15H40MA	
T85	UN-955		CH100	" " 15H40MA	
T86	UY-76		CH101	" " 15H40MA	
T87	UY-384		CH102	" " 15H40MA	
T88	UN-955		CH103	" " 15H40MA	
T89	UY-176		CH104	" " 15H40MA	
T90	UN-955		CH105	" " 15H40MA	
T91	UY-384		CH106	" " 15H40MA	
T92	UN-955		CH107	" " 15H40MA	
T93	UY-76		CH108	" " 15H40MA	
T94	UY-384		CH109	" " 15H40MA	
T95	UN-955		CH110	" " 15H40MA	
T96	UY-176		CH111	" " 15H40MA	
T97	UN-955		CH112	" " 15H40MA	
T98	UY-384		CH113	" " 15H40MA	
T99	UN-955		CH114	" " 15H40MA	
T100	UY-76		CH115	" " 15H40MA	

Figure 25(G)

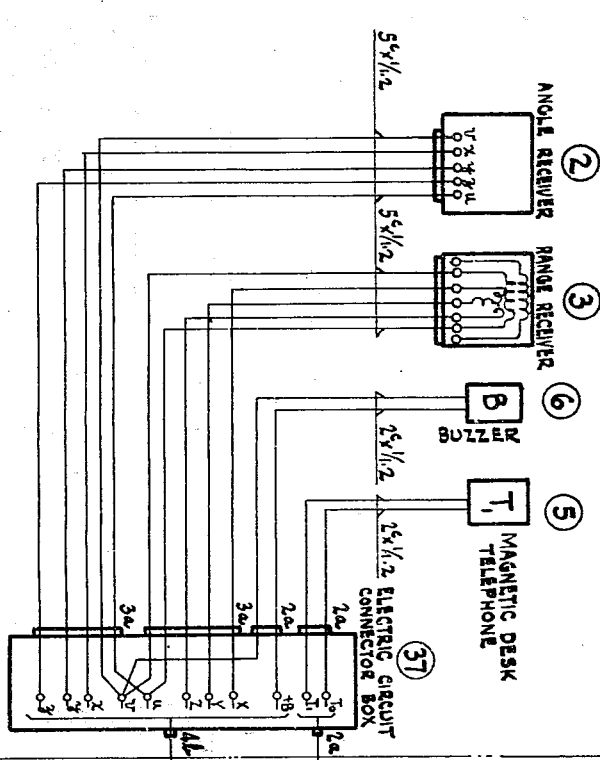
NAVJAG



	TYPE WIRE MARK & NO.	PREFERRED ELECTRIC CURRENT	NO. AMT. METERS	PLACE USED	TOTAL	NOTES
"	7 ^x /2 10-2AL-1	B	65X2	(5) (39)		
"	" "	"	6-5	(4) (38)		
"	" "	"	3-5	(5A) (10)		
	TYPE WIRE MARK & NO.	PREFERRED ELECTRIC CURRENT	NO. AMT. METERS	PLACE USED	TOTAL	NOTES
"	10 ^s /32 1CT-A	32	45x3	(15) (39)		
"	" "	"	1 x 3	(39) (18)		
"	" "	"	45x3	(7) (39)	33	



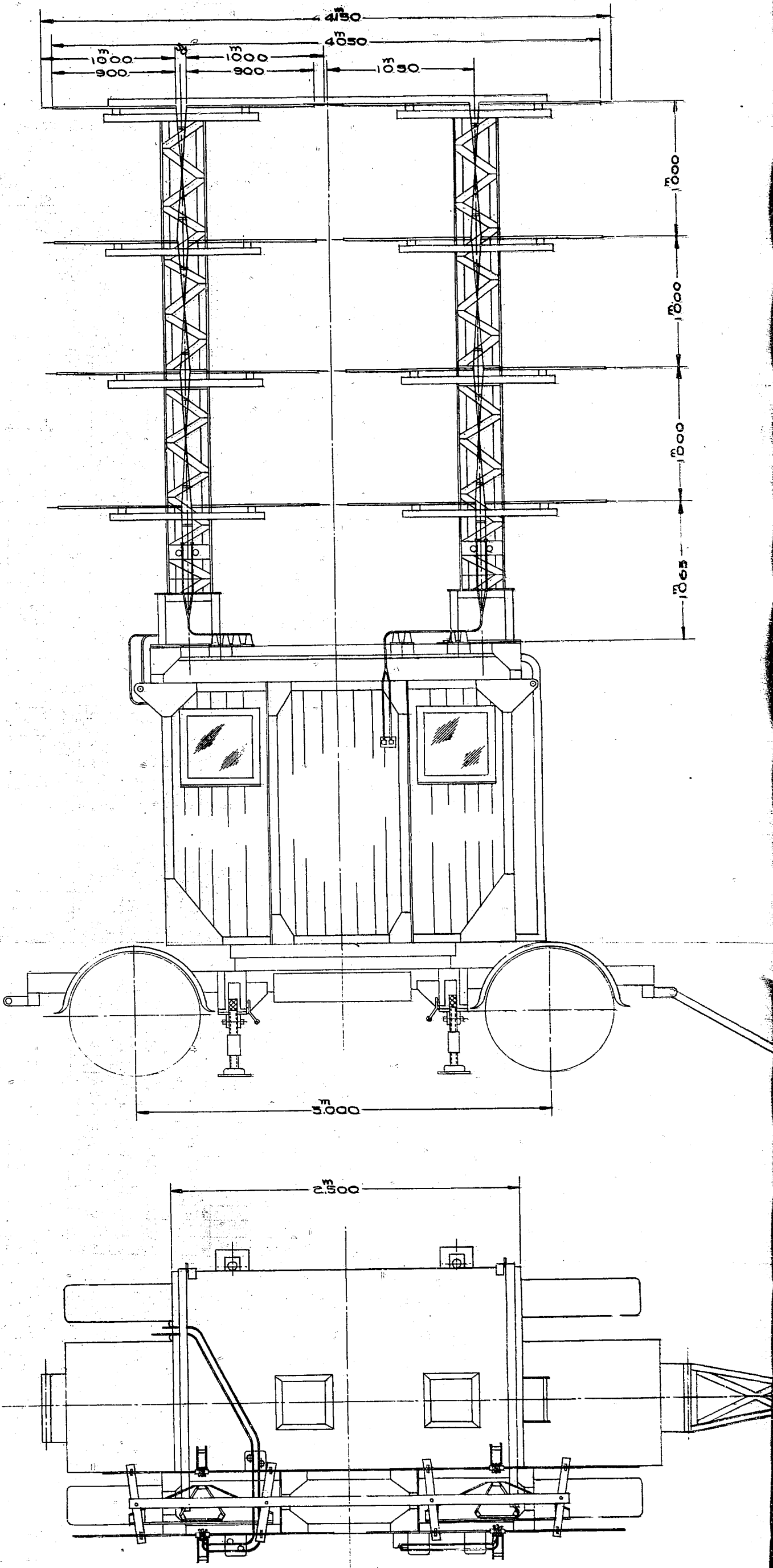
OBSERVATION POST



TYPE WIRE MARK & NO.	PERMITTED CURRENT	NO. AMT. METRES	PLACE USED	TOTAL	NOTES
1"x1/2 12-2RL-1	8	6.5x2	(5) (33)		
" " " "	"	6.5	(4) (33)		
" " " "	"	3.5	(9) (10)		
" " " "	"	3.5	(35) (14)		
" " " "	"	2.5	(14) (8)		
" " " "	"	3.5	(35) (4)		
" " " "	"	3.1	" (34)	59.3	
" " " "	"	2.2	" (27)		
" " " "	"	4.5	" (23)		
" " " "	"	4.5	" (23)		
" " " "	"	0.5	(33) (27)		
" " " "	"	1	" (31)		
" " " "	"	0.5	(27) (31)		
" " " "	"	3+1	(30) (12)		
1"x1/2 12-7RL-5	4	3	(33) (1)	4.1	
" " " "	"	1.1	(27) (26)		
5"x1/2 12-5RL-4	"	0.5	(33) (27)	1.6	
" " " "	"	1.1	(21) (26)		
2"x1/2 12-2RL-1	8		(37) (6)		
" " " "	"		" (5)		
5"x1/2 12-5RL-4	4		(4) (2)		
" " " "	"		" (3)		
TYPE WIRE MARK & NO.	PERMITTED CURRENT	NO. AMT. METRES	PLACE USED	TOTAL	NOTES
10c/o.32 1CT-4	32	4.5x3	(15) (39)		
" " " "	"	1x3	(39) (16)		
" " " "	"	4.5x3	" (39)	33	
" " " "	"	1x3	(16) (34)		
5"x15/64 3CT-11	10	0.5	(34) (25)	2	
" " " "	"	1.5	(25) (29)		
37/o.2 1CT-1	6	5x5	(15) (16)	2.5	
10c/o.32 1CT-4	32	6x3	(34) (37)	18	
25x5/16 2CTB-2	5	0.5	(25) (28)	6.5	
" " " "	"	6	(28) (37)		
25x19/64 2CTB-1	3	6	(5) (37)	6	
10c/o.32 1CT-4	32	50x3	(31) (32)	150	
5"x5/64 3CTB-5	5	50	" "	50	
25x5/64 2CTB-2	"	50	" "	50	
25x9/64 2CTB-1	3	50	" "	50	
5"x5/64 2CTB-5	"	5	(30) (37)	5	
25x9/64 2CTB-1	"	50	(32) (37)	50	
9"x5/64 7CTB-7	5	50	" "	50	
7/o.8 1RL-3	20	8x3	(33) (35)		
" " " "	"	4.5x12	(35) (18)	54	
" " " "	"	5x3	(35) (19)		
25x1/6 16-2RL-1	10	6.5	" (11)	6.5	

37	ELECT. CURRENT CONNECTOR BOX			
38	ELECT. CURRENT CONNECTOR BOX			
39	ELECT. CURRENT SELECTOR SWITCH			
40	ANTENNA 2 LINE 4 STAGE			
41	ANTENNA INSULATOR			
42	DISCHARGE TUBE			
43	SPECIAL DISCHARGE TUBE			
44	HIGH FREQUENCY CABLE			
45	MARK CORD			
46	ELECT. WIRE INSULATOR			

Figure 1(H)
EXTERNAL WIRING



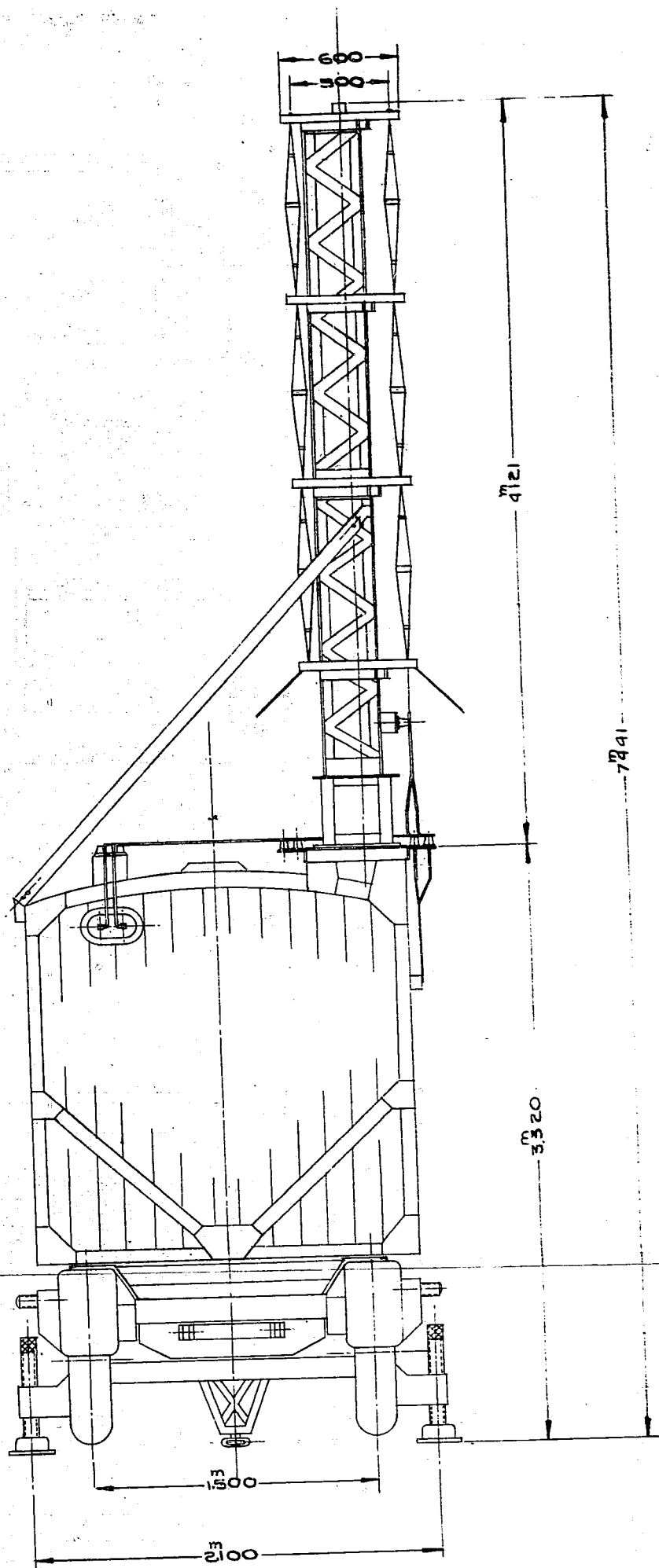


Figure 2(H)
OUTLINE

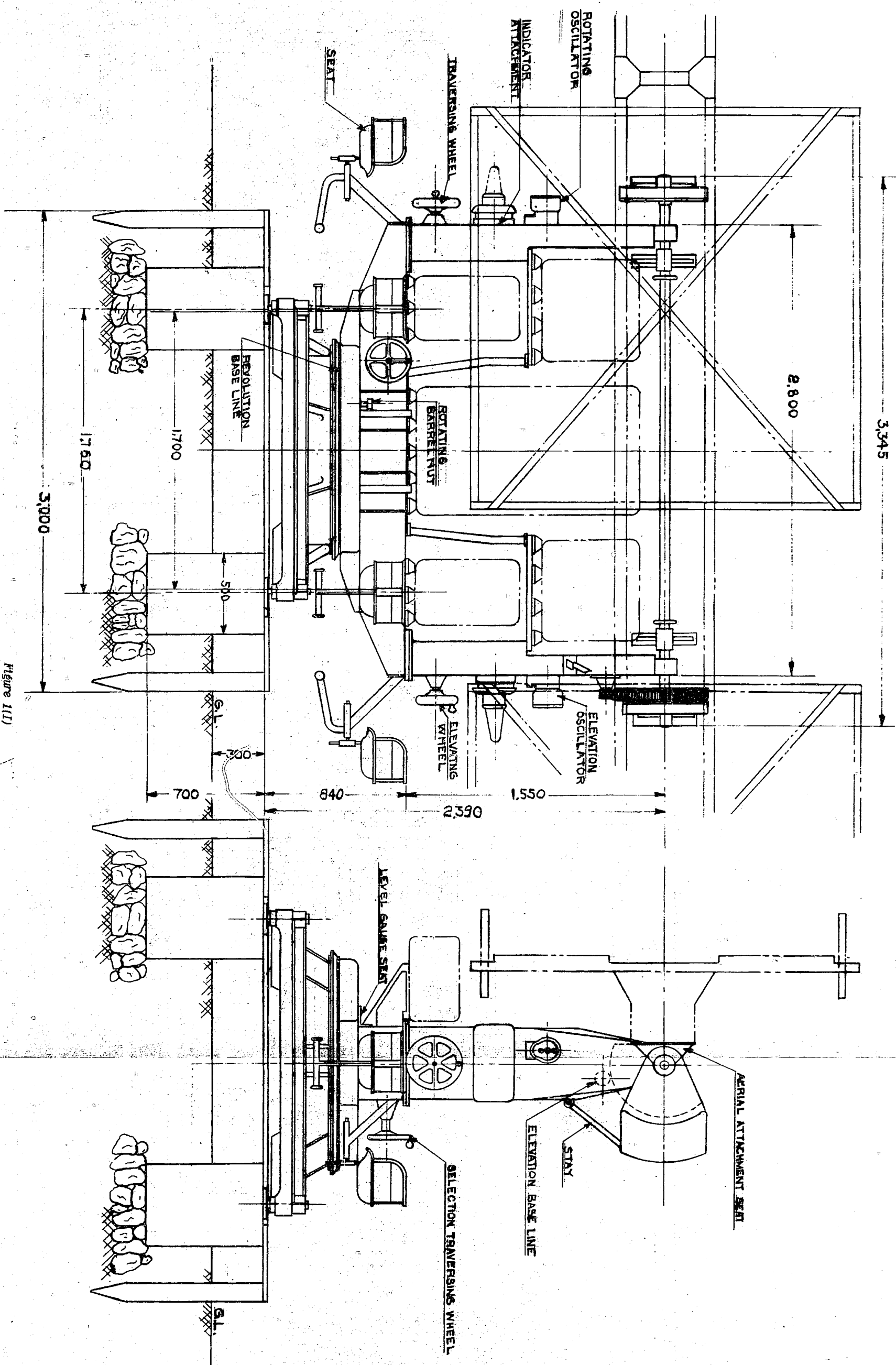
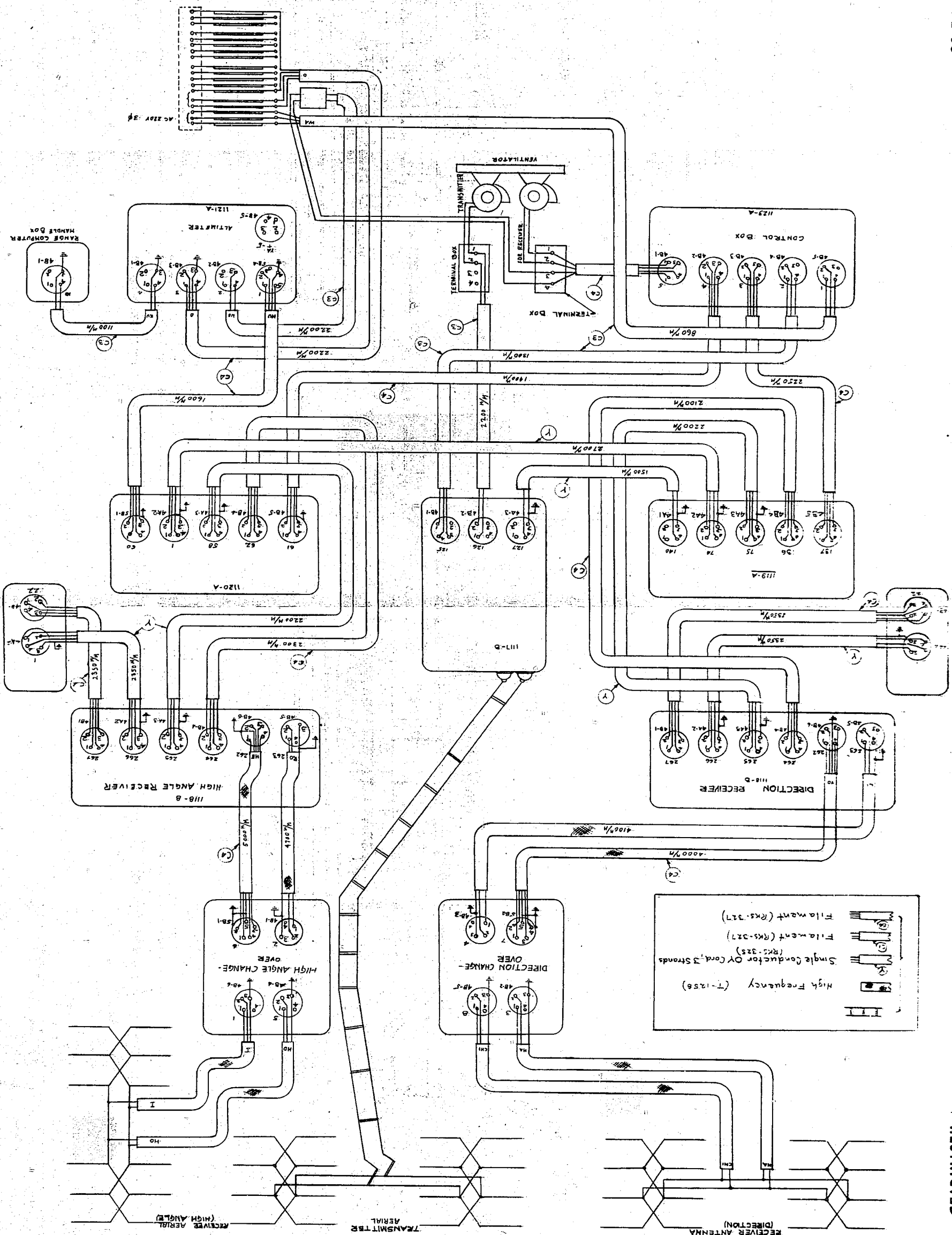


Figure 1(1)
OUTLINE



ENCLOSURE (I), continued

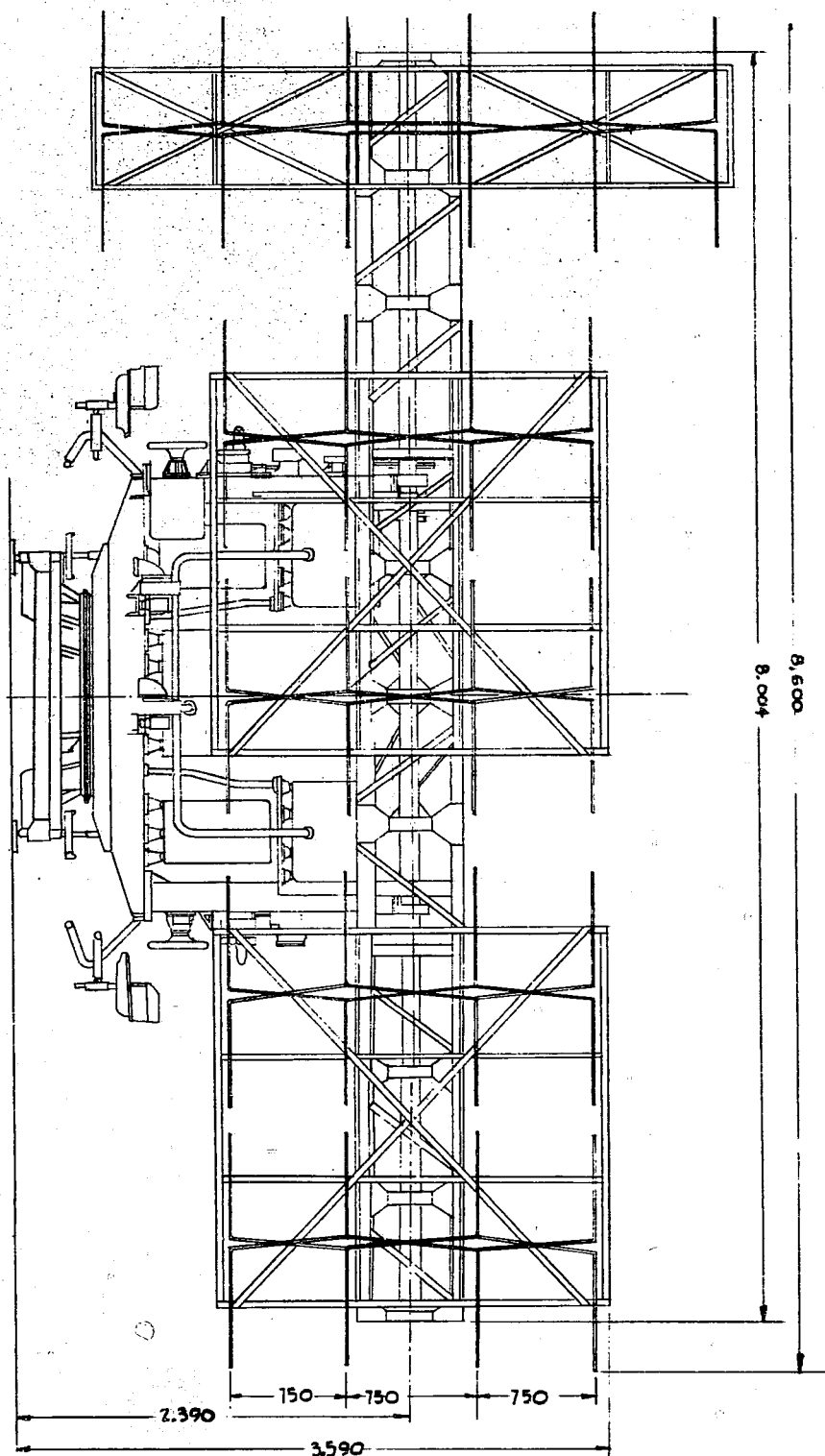
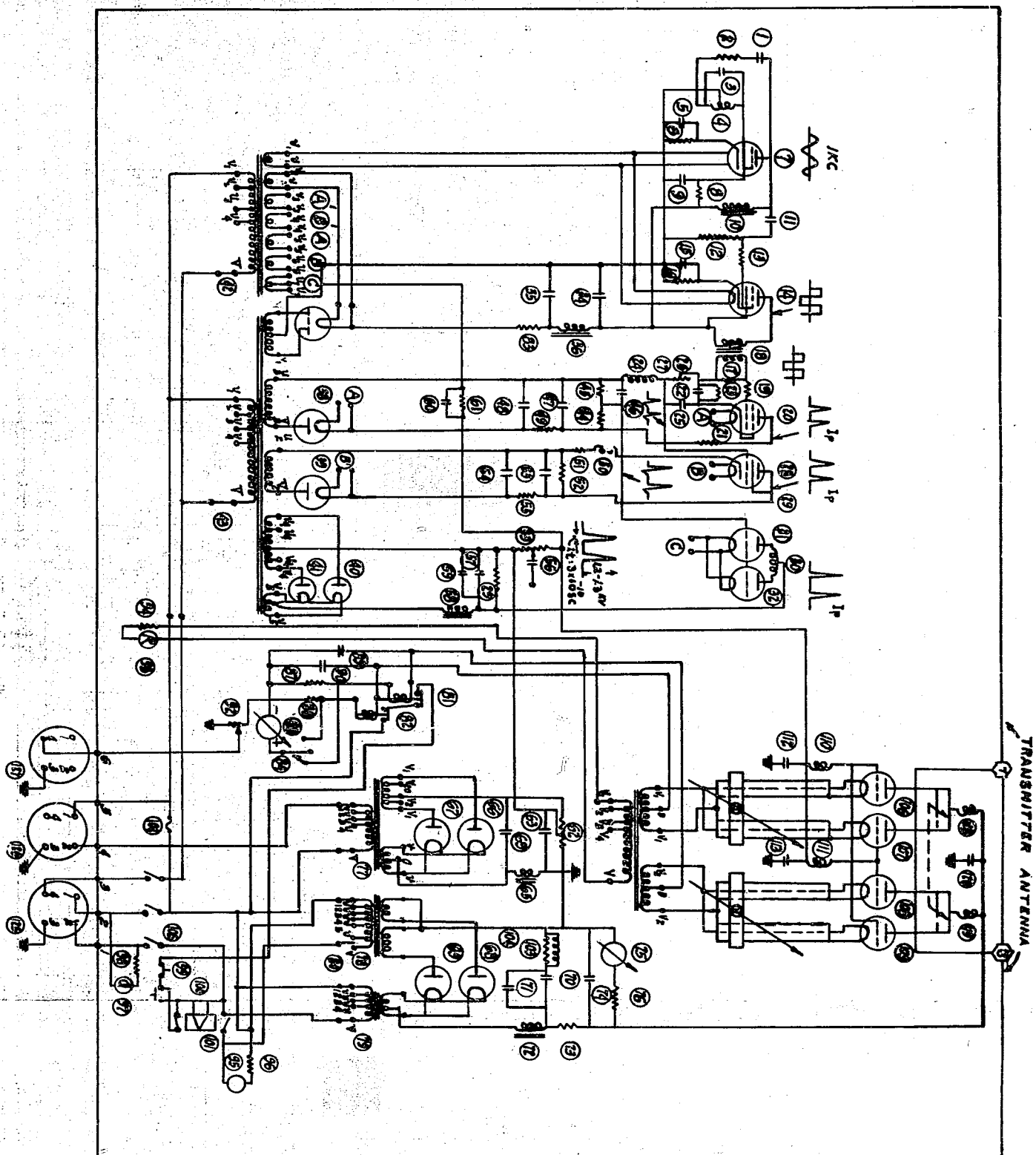


Figure 9(I)
ANTENNA



NO.	DESCRIPTION	QWNT	RATING	MODEL-TYPE	INDEX	NO.	DESCRIPTION	QWNT	RATING	MODEL-TYPE	INDEX	NO.	DESCRIPTION	QWNT	RATING	MODEL-TYPE	INDEX
1	COUPLING CAPACITOR	1	100 P.F.	KOD-100	1000 T	50	SEVEN COIL	1	100 M.H.	MC-100	1000 T	59	BUTTON SWITCH	1	100 M.H.	MC-100	1000 T
2	COUPLING CAPACITOR	1	100 P.F.	KOD-100	1000 T	51	SEVEN COIL	1	100 M.H.	MC-100	1000 T	60	SEVEN COIL	1	100 M.H.	MC-100	1000 T
3	OSC. CONDENSER	1	100 P.F.	KOD-100	1000 T	52	SEVEN COIL	1	100 M.H.	MC-100	1000 T	61	SEVEN COIL	1	100 M.H.	MC-100	1000 T
4	OSC. COIL	1	100 M.H.	KOD-100	1000 T	53	SEVEN COIL	1	100 M.H.	MC-100	1000 T	62	SEVEN COIL	1	100 M.H.	MC-100	1000 T
5	OSC. COIL	1	100 M.H.	KOD-100	1000 T	54	SEVEN COIL	1	100 M.H.	MC-100	1000 T	63	SEVEN COIL	1	100 M.H.	MC-100	1000 T
6	OSC. COIL	1	100 M.H.	KOD-100	1000 T	55	SEVEN COIL	1	100 M.H.	MC-100	1000 T	64	SEVEN COIL	1	100 M.H.	MC-100	1000 T
7	OSC. COIL	1	100 M.H.	KOD-100	1000 T	56	SEVEN COIL	1	100 M.H.	MC-100	1000 T	65	SEVEN COIL	1	100 M.H.	MC-100	1000 T
8	OSC. COIL	1	100 M.H.	KOD-100	1000 T	57	SEVEN COIL	1	100 M.H.	MC-100	1000 T	66	SEVEN COIL	1	100 M.H.	MC-100	1000 T
9	OSC. COIL	1	100 M.H.	KOD-100	1000 T	58	SEVEN COIL	1	100 M.H.	MC-100	1000 T	67	SEVEN COIL	1	100 M.H.	MC-100	1000 T
10	OSC. COIL	1	100 M.H.	KOD-100	1000 T	59	SEVEN COIL	1	100 M.H.	MC-100	1000 T	68	SEVEN COIL	1	100 M.H.	MC-100	1000 T
11	OSC. COIL	1	100 M.H.	KOD-100	1000 T	60	SEVEN COIL	1	100 M.H.	MC-100	1000 T	69	SEVEN COIL	1	100 M.H.	MC-100	1000 T
12	OSC. COIL	1	100 M.H.	KOD-100	1000 T	61	SEVEN COIL	1	100 M.H.	MC-100	1000 T	70	SEVEN COIL	1	100 M.H.	MC-100	1000 T
13	OSC. COIL	1	100 M.H.	KOD-100	1000 T	62	SEVEN COIL	1	100 M.H.	MC-100	1000 T	71	SEVEN COIL	1	100 M.H.	MC-100	1000 T
14	OSC. COIL	1	100 M.H.	KOD-100	1000 T	63	SEVEN COIL	1	100 M.H.	MC-100	1000 T	72	SEVEN COIL	1	100 M.H.	MC-100	1000 T
15	OSC. COIL	1	100 M.H.	KOD-100	1000 T	64	SEVEN COIL	1	100 M.H.	MC-100	1000 T	73	SEVEN COIL	1	100 M.H.	MC-100	1000 T
16	OSC. COIL	1	100 M.H.	KOD-100	1000 T	65	SEVEN COIL	1	100 M.H.	MC-100	1000 T	74	SEVEN COIL	1	100 M.H.	MC-100	1000 T
17	OSC. COIL	1	100 M.H.	KOD-100	1000 T	66	SEVEN COIL	1	100 M.H.	MC-100	1000 T	75	SEVEN COIL	1	100 M.H.	MC-100	1000 T
18	OSC. COIL	1	100 M.H.	KOD-100	1000 T	67	SEVEN COIL	1	100 M.H.	MC-100	1000 T	76	SEVEN COIL	1	100 M.H.	MC-100	1000 T
19	OSC. COIL	1	100 M.H.	KOD-100	1000 T	68	SEVEN COIL	1	100 M.H.	MC-100	1000 T	77	SEVEN COIL	1	100 M.H.	MC-100	1000 T
20	OSC. COIL	1	100 M.H.	KOD-100	1000 T	69	SEVEN COIL	1	100 M.H.	MC-100	1000 T	78	SEVEN COIL	1	100 M.H.	MC-100	1000 T
21	OSC. COIL	1	100 M.H.	KOD-100	1000 T	70	SEVEN COIL	1	100 M.H.	MC-100	1000 T	79	SEVEN COIL	1	100 M.H.	MC-100	1000 T
22	OSC. COIL	1	100 M.H.	KOD-100	1000 T	71	SEVEN COIL	1	100 M.H.	MC-100	1000 T	80	SEVEN COIL	1	100 M.H.	MC-100	1000 T
23	OSC. COIL	1	100 M.H.	KOD-100	1000 T	72	SEVEN COIL	1	100 M.H.	MC-100	1000 T	81	SEVEN COIL	1	100 M.H.	MC-100	1000 T
24	OSC. COIL	1	100 M.H.	KOD-100	1000 T	73	SEVEN COIL	1	100 M.H.	MC-100	1000 T	82	SEVEN COIL	1	100 M.H.	MC-100	1000 T
25	OSC. COIL	1	100 M.H.	KOD-100	1000 T	74	SEVEN COIL	1	100 M.H.	MC-100	1000 T	83	SEVEN COIL	1	100 M.H.	MC-100	1000 T
26	OSC. COIL	1	100 M.H.	KOD-100	1000 T	75	SEVEN COIL	1	100 M.H.	MC-100	1000 T	84	SEVEN COIL	1	100 M.H.	MC-100	1000 T
27	OSC. COIL	1	100 M.H.	KOD-100	1000 T	76	SEVEN COIL	1	100 M.H.	MC-100	1000 T	85	SEVEN COIL	1	100 M.H.	MC-100	1000 T
28	OSC. COIL	1	100 M.H.	KOD-100	1000 T	77	SEVEN COIL	1	100 M.H.	MC-100	1000 T	86	SEVEN COIL	1	100 M.H.	MC-100	1000 T
29	OSC. COIL	1	100 M.H.	KOD-100	1000 T	78	SEVEN COIL	1	100 M.H.	MC-100	1000 T	87	SEVEN COIL	1	100 M.H.	MC-100	1000 T
30	OSC. COIL	1	100 M.H.	KOD-100	1000 T	79	SEVEN COIL	1	100 M.H.	MC-100	1000 T	88	SEVEN COIL	1	100 M.H.	MC-100	1000 T
31	OSC. COIL	1	100 M.H.	KOD-100	1000 T	80	SEVEN COIL	1	100 M.H.	MC-100	1000 T	89	SEVEN COIL	1	100 M.H.	MC-100	1000 T
32	OSC. COIL	1	100 M.H.	KOD-100	1000 T	81	SEVEN COIL	1	100 M.H.	MC-100	1000 T	90	SEVEN COIL	1	100 M.H.	MC-100	1000 T
33	OSC. COIL	1	100 M.H.	KOD-100	1000 T	82	SEVEN COIL	1	100 M.H.	MC-100	1000 T	91	SEVEN COIL	1	100 M.H.	MC-100	1000 T
34	OSC. COIL	1	100 M.H.	KOD-100	1000 T	83	SEVEN COIL	1	100 M.H.	MC-100	1000 T	92	SEVEN COIL	1	100 M.H.	MC-100	1000 T
35	OSC. COIL	1	100 M.H.	KOD-100	1000 T	84	SEVEN COIL	1	100 M.H.	MC-100	1000 T	93	SEVEN COIL	1	100 M.H.	MC-100	1000 T
36	OSC. COIL	1	100 M.H.	KOD-100	1000 T	85	SEVEN COIL	1	100 M.H.	MC-100	1000 T	94	SEVEN COIL	1	100 M.H.	MC-100	1000 T
37	OSC. COIL	1	100 M.H.	KOD-100	1000 T	86	SEVEN COIL	1	100 M.H.	MC-100	1000 T	95	SEVEN COIL	1	100 M.H.	MC-100	1000 T
38	OSC. COIL	1	100 M.H.	KOD-100	1000 T	87	SEVEN COIL	1	100 M.H.	MC-100	1000 T	96	SEVEN COIL	1	100 M.H.	MC-100	1000 T
39	OSC. COIL	1	100 M.H.	KOD-100	1000 T	88	SEVEN COIL	1	100 M.H.	MC-100	1000 T	97	SEVEN COIL	1	100 M.H.	MC-100	1000 T
40	OSC. COIL	1	100 M.H.	KOD-100	1000 T	89	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
41	OSC. COIL	1	100 M.H.	KOD-100	1000 T	90	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
42	OSC. COIL	1	100 M.H.	KOD-100	1000 T	91	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
43	OSC. COIL	1	100 M.H.	KOD-100	1000 T	92	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
44	OSC. COIL	1	100 M.H.	KOD-100	1000 T	93	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
45	OSC. COIL	1	100 M.H.	KOD-100	1000 T	94	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
46	OSC. COIL	1	100 M.H.	KOD-100	1000 T	95	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
47	OSC. COIL	1	100 M.H.	KOD-100	1000 T	96	SEVEN COIL	1	100 M.H.	MC-100	1000 T						
48	OSC. COIL	1	100 M.H.	KOD-100	1000 T	97	SEVEN COIL	1	100 M.H.	MC-100	1000 T						

Figure 5(1)
TRANSMITTER



ENCLOSURE (I), continued

NO.	MODEL TYPE	INDEX	RATING	DESCRIPTION	QTY
1		MK-12557		CABLE HEAD	1
2	M-60	"	0.1μF 7000V	COUPLING COND.	1
3	M-60	"	0.05μF 1000V	"	1
4	NV-200-S	RIKEN	100 KΩ	CONTROL RESISTOR	1
5	C-3	RIKENOHM	1 KΩ	RESISTOR	1
6	UZ-6C6			TUBE	1
7	KOD-510	NTK	0.5μF 1000V	COUPLING COND.	1
8	KOD-2010	"	2μF 1000V	COUPLING COND.	1
9	C-3	RIKENOHM	100 KΩ	COUPLING COND.	1
10	C-3	"	50 KΩ	ANODE RESISTOR	1
11	M-60	NTK	0.05μF 1000V	COUPLING COND.	1
12	C-3	RIKENOHM	500 KΩ	RESISTOR	1
13	S9-E-75-G			PILOT LAMP	1
14	KOD-510	NTK	0.5μF 1000V	REFLECTING COND.	1
15	NV-200-S	RIKEN	200 KΩ	VOLTAGE DIVIDER	1
16	KOD-510	NTK	0.5μF 1000V	COUPLING COND.	1
17	C-3	RIKENOHM	100 KΩ	VOLTAGE DIVIDER	1
18	C-3	"	"	"	1
19					
20	KOD-1010	NTK	1μF 1000V	COUPLING COND.	1
21	C-3	RIKENOHM	500 KΩ	RESISTOR	1
22	MK-12557			CABLE HEAD	1
23	KOD-510	NTK	0.5μF 1000V	REFLECTING COND.	1
24					
25	NV-200-S	RIKEN	100 KΩ	CONTROL RESISTOR	1
26					
27	502-SA-51	DK-7916	200 KΩ	VOLTAGE DIVIDER	1
28	C-3	RIKENOHM	300K 2N 25V	TRANSFORMER	1
29	KX142		100 KΩ	STRAP	1
30	KOD-520	NTK	0.5μF 2000V	TUBE	1
31	C-3	RIKENOHM	100 KΩ	GRID RESISTOR	1
32	NV-200-S	"	50 KΩ	VOLTAGE DIVIDER	1
33	C-3	"	20 KΩ	"	1
34	KOD-515	NTK	0.5μF 1500V	COUPLING COND.	1
35	C-3	RIKENOHM	100 KΩ	VOLTAGE DIVIDER	1
36	KOD-515	NTK	0.5μF 1500V	COUPLING COND.	1
37	NV-200-S	RIKEN	200 KΩ	CONTROL RESISTOR	1
38	C-3	RIKENOHM	500 KΩ	VOLTAGE DIVIDER	1
39	505-3ME	DK-B206	6.3V-1A	FLUORESCENT TRANSFORMER	1
40	SW-101A	MOD 82002-A		DOOR SWITCH	1

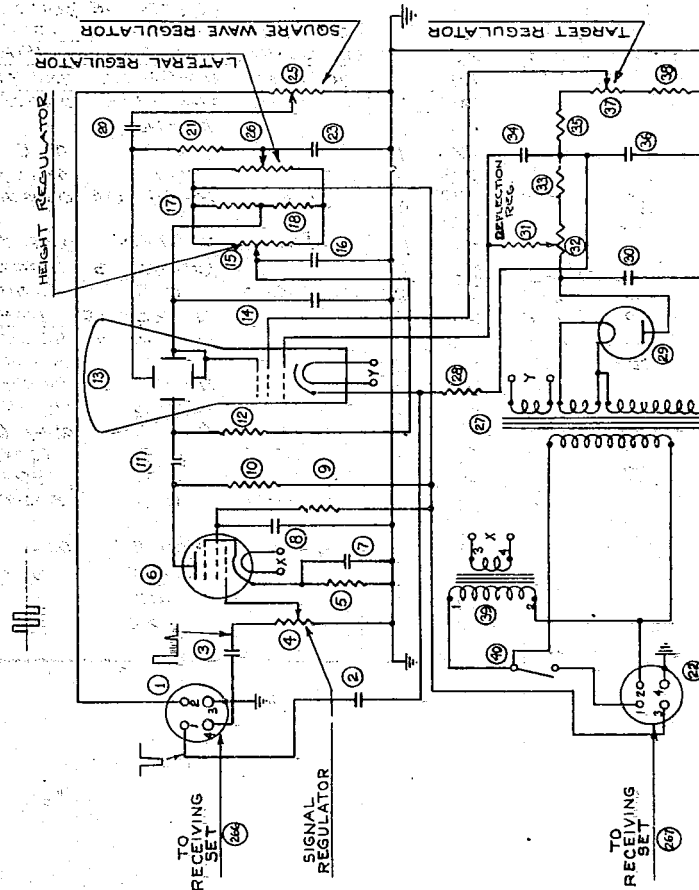
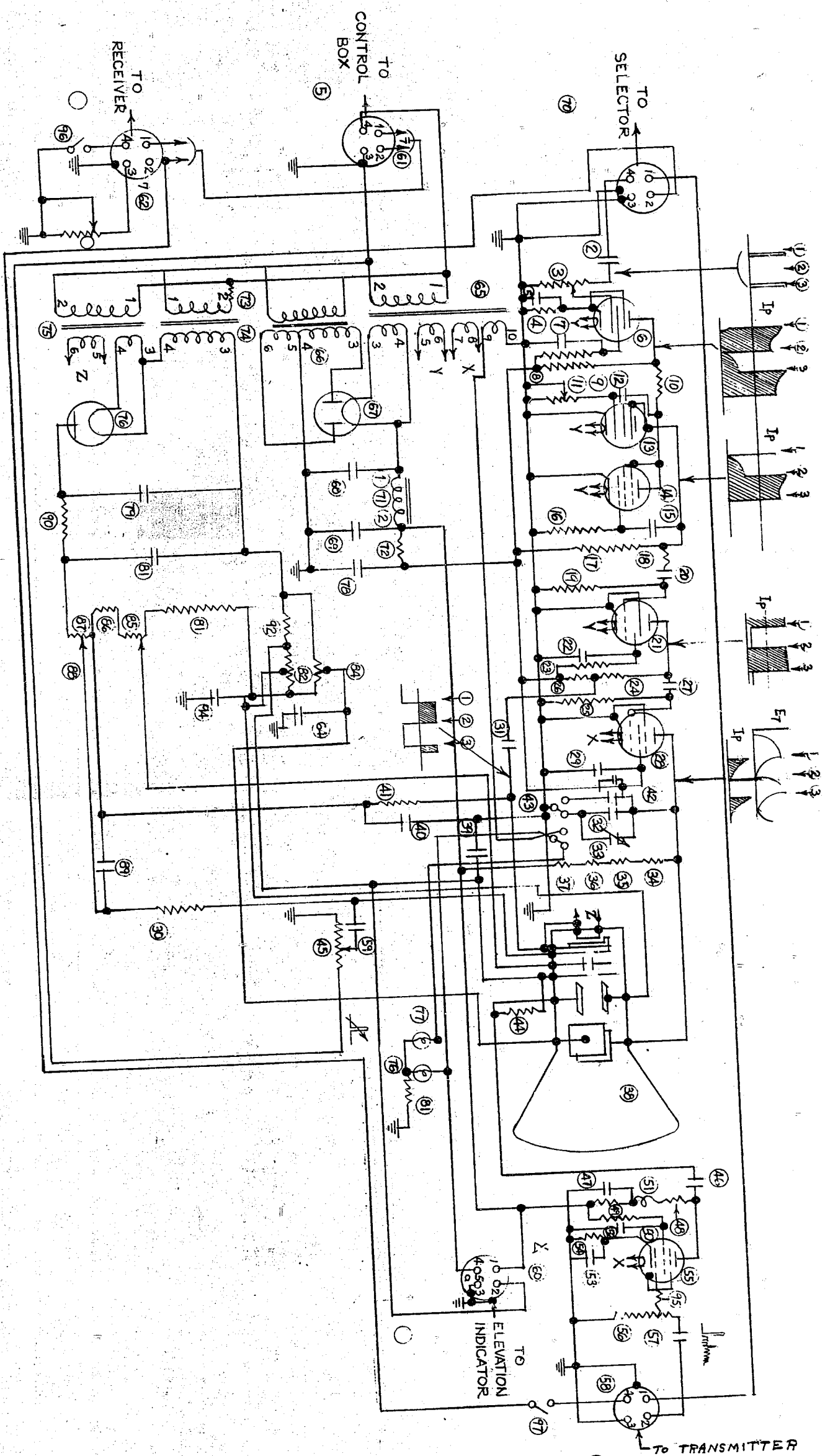


Figure 9(1)
INDICATOR

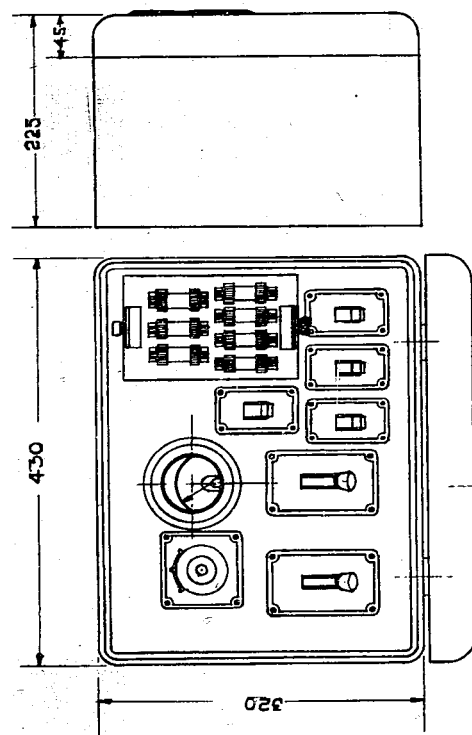
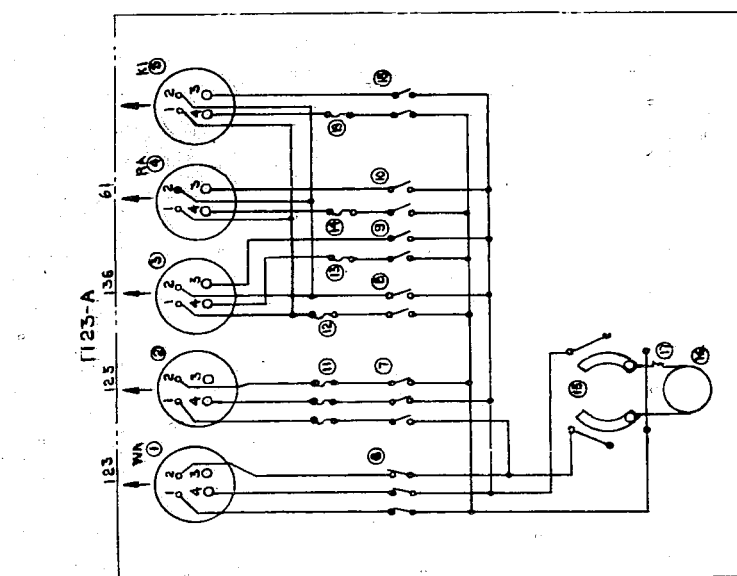
ENCLOSURE (1), continued

Figure 10(1)
INDICATOR

SIGN NO.	TYPE	INDEX	NUMBER	NOTES	SIGN NO.	TYPE	INDEX	NUMBER	NOTES
1	NTK	MK-1257	0.05M/100V	CABLE HEAD	50	RIKENOHM	C-3	100V	5-BE 500V
2	NTK	M-60	0.05M/100V	COIL, 100V	51	RIKENOHM	RIKENOHM	100V	5-BE 500V
3	RIKENOHM	RIKENOHM	1K	COIL, 100V	52	NTK	RIKENOHM	100V	5-BE 500V
4	NTK	KOD-2010	24V/100V	COIL, 100V	53	RIKENOHM	KOD-2010	100V	5-BE 500V
5	NTK	U-60	24V/100V	COIL, 100V	54	RIKENOHM	U-60	100V	5-BE 500V
6	NTK	KOD-515	100K	COIL, 100V	55	RIKENOHM	KOD-515	100V	5-BE 500V
7	NTK	RIKENOHM	2K	COIL, 100V	56	RIKENOHM	RIKENOHM	100V	5-BE 500V
8	RIKENOHM	RIKENOHM	20K	COIL, 100V	57	NTK	RIKENOHM	100V	5-BE 500V
9	RIKENOHM	RIKENOHM	200K	COIL, 100V	58	NTK	RIKENOHM	100V	5-BE 500V
10	RIKENOHM	RIKENOHM	200K	COIL, 100V	59	NTK	RIKENOHM	100V	5-BE 500V
11	NTK	U-60	24V/100V	COIL, 100V	60	RIKENOHM	U-60	100V	5-BE 500V
12	NTK	U-60	24V/100V	COIL, 100V	61	RIKENOHM	U-60	100V	5-BE 500V
13	NTK	U-60	24V/100V	COIL, 100V	62	RIKENOHM	U-60	100V	5-BE 500V
14	NTK	U-60	24V/100V	COIL, 100V	63	NTK	U-60	100V	5-BE 500V
15	NTK	U-60	24V/100V	COIL, 100V	64	NTK	U-60	100V	5-BE 500V
16	RIKENOHM	RIKENOHM	20K	COIL, 100V	65	RIKENOHM	RIKENOHM	100V	5-BE 500V
17	RIKENOHM	RIKENOHM	20K	COIL, 100V	66	RIKENOHM	RIKENOHM	100V	5-BE 500V
18	RIKENOHM	RIKENOHM	20K	COIL, 100V	67	RIKENOHM	RIKENOHM	100V	5-BE 500V
19	RIKENOHM	RIKENOHM	20K	COIL, 100V	68	RIKENOHM	RIKENOHM	100V	5-BE 500V
20	NTK	U-60	24V/100V	COIL, 100V	69	NTK	U-60	100V	5-BE 500V
21	NTK	U-60	24V/100V	COIL, 100V	70	NTK	U-60	100V	5-BE 500V
22	NTK	U-60	24V/100V	COIL, 100V	71	NTK	U-60	100V	5-BE 500V
23	RIKENOHM	RIKENOHM	20K	COIL, 100V	72	RIKENOHM	RIKENOHM	100V	5-BE 500V
24	RIKENOHM	RIKENOHM	20K	COIL, 100V	73	RIKENOHM	RIKENOHM	100V	5-BE 500V
25	RIKENOHM	RIKENOHM	20K	COIL, 100V	74	RIKENOHM	RIKENOHM	100V	5-BE 500V
26	RIKENOHM	RIKENOHM	20K	COIL, 100V	75	RIKENOHM	RIKENOHM	100V	5-BE 500V
27	NTK	U-60	24V/100V	COIL, 100V	76	NTK	U-60	100V	5-BE 500V
28	NTK	U-60	24V/100V	COIL, 100V	77	NTK	U-60	100V	5-BE 500V
29	NTK	U-60	24V/100V	COIL, 100V	78	NTK	U-60	100V	5-BE 500V
30	RIKENOHM	RIKENOHM	20K	COIL, 100V	79	RIKENOHM	RIKENOHM	100V	5-BE 500V
31	NTK	U-60	24V/100V	COIL, 100V	80	NTK	U-60	100V	5-BE 500V
32	NTK	U-60	24V/100V	COIL, 100V	81	NTK	U-60	100V	5-BE 500V
33	NTK	U-60	24V/100V	COIL, 100V	82	NTK	U-60	100V	5-BE 500V
34	RIKENOHM	RIKENOHM	20K	COIL, 100V	83	RIKENOHM	RIKENOHM	100V	5-BE 500V
35	RIKENOHM	RIKENOHM	20K	COIL, 100V	84	RIKENOHM	RIKENOHM	100V	5-BE 500V
36	RIKENOHM	RIKENOHM	20K	COIL, 100V	85	RIKENOHM	RIKENOHM	100V	5-BE 500V
37	RIKENOHM	RIKENOHM	20K	COIL, 100V	86	RIKENOHM	RIKENOHM	100V	5-BE 500V
38	RIKENOHM	RIKENOHM	20K	COIL, 100V	87	RIKENOHM	RIKENOHM	100V	5-BE 500V
39	NTK	U-60	24V/100V	COIL, 100V	88	NTK	U-60	100V	5-BE 500V
40	NTK	U-60	24V/100V	COIL, 100V	89	NTK	U-60	100V	5-BE 500V
41	NTK	U-60	24V/100V	COIL, 100V	90	NTK	U-60	100V	5-BE 500V
42	NTK	U-60	24V/100V	COIL, 100V	91	NTK	U-60	100V	5-BE 500V
43	NTK	U-60	24V/100V	COIL, 100V	92	NTK	U-60	100V	5-BE 500V
44	NTK	U-60	24V/100V	COIL, 100V	93	NTK	U-60	100V	5-BE 500V
45	NTK	U-60	24V/100V	COIL, 100V	94	NTK	U-60	100V	5-BE 500V
46	NTK	U-60	24V/100V	COIL, 100V	95	NTK	U-60	100V	5-BE 500V
47	NTK	U-60	24V/100V	COIL, 100V	96	NTK	U-60	100V	5-BE 500V
48	NTK	U-60	24V/100V	COIL, 100V	97	NTK	U-60	100V	5-BE 500V
49	RIKENOHM	RIKENOHM	20K	COIL, 100V	98	RIKENOHM	RIKENOHM	100V	5-BE 500V

RESTRICTED

ENCLOSURE (I), continued



NO.	NAME	INDEX	TYPE	PURPOSE	NO.	NOTES
1	CONTACT PLUG	MN-125ST		CONTACT PLUG	1	
2	"	"		"	"	
3	"	"		"	"	
4	"	"		"	"	
5	"	"		"	"	
6	SWITCH	80A	TRIODE	BATTERY SWITCH	1	
7	"	15A	SMALL FUSE	"	"	105A
8	"	"	"	"	"	"
9	"	"	"	"	"	"
10	"	"	"	"	"	"
11	NAVY STANDARD	TYPE 1	10A	FUSE	1	
12	"	TYPE 2	3A	"	"	
13	"	"	"	"	"	
14	"	"	"	"	"	
15	D-20-S	250V		WATERMETER SWITCH	1	
16	CO-25	250V		WATERMETER SWITCH	1	
17	SWITCH	15A	MULTIPLIER	FOR ABOVE	"	105A
18	NAVY STANDARD	TYPE 1	3A	WATERMETER SWITCH	1	

Figure 11(1)
POWER CONTROL UNIT

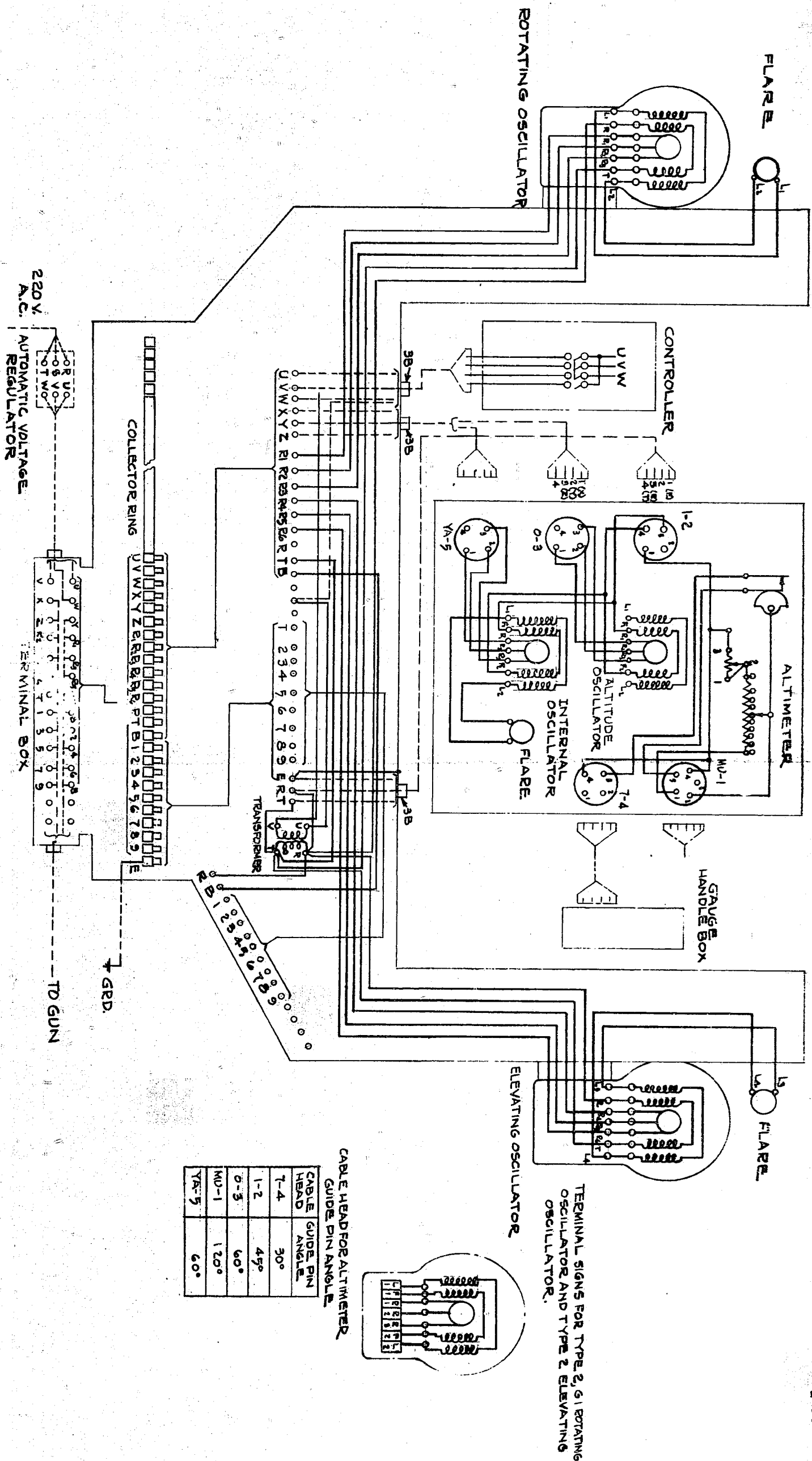


Figure 13(1)
SYNCHRO DATA TRANSMISSION

ENCLOSURE (J)

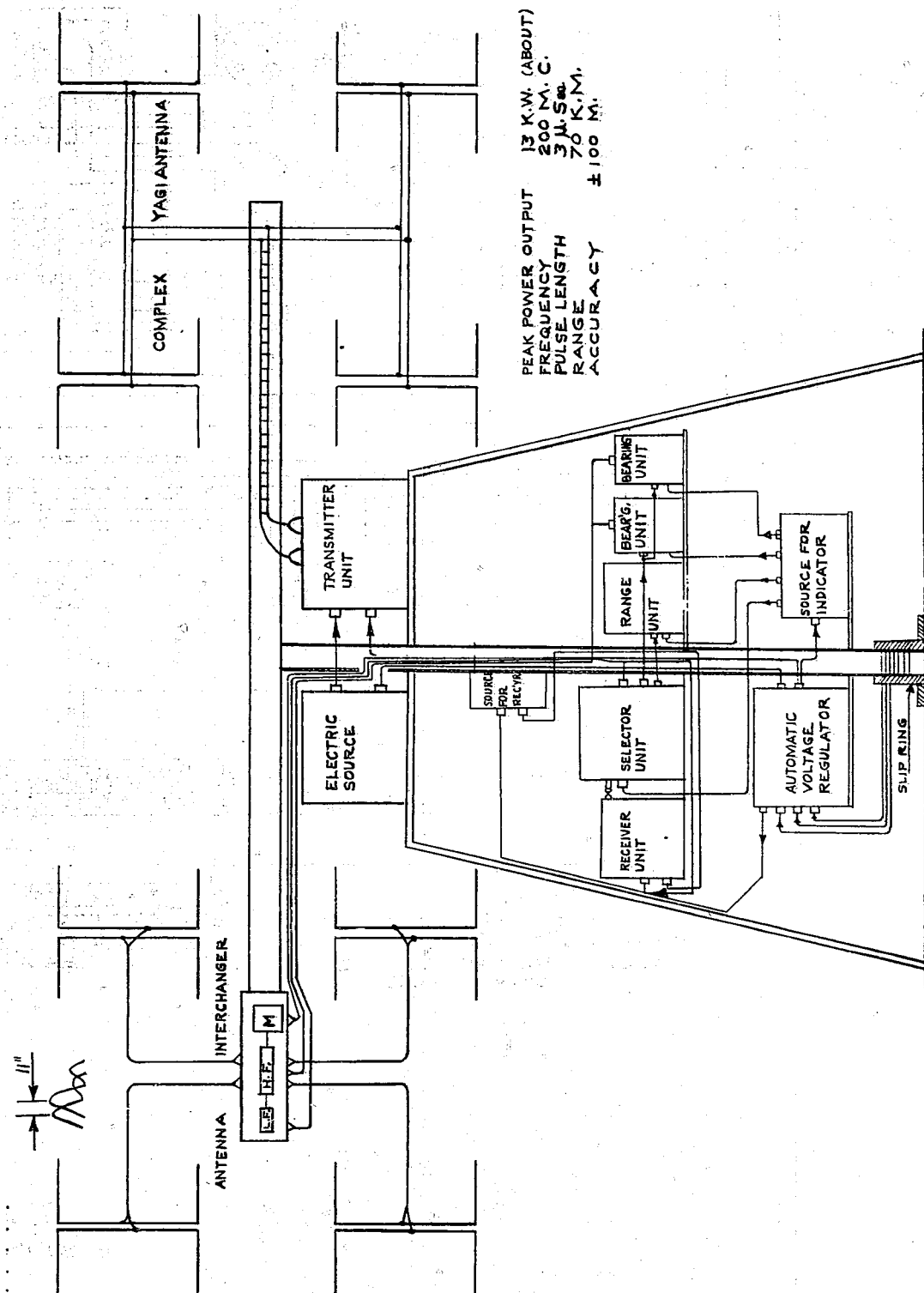


Figure 1(J)
 OUTLINE

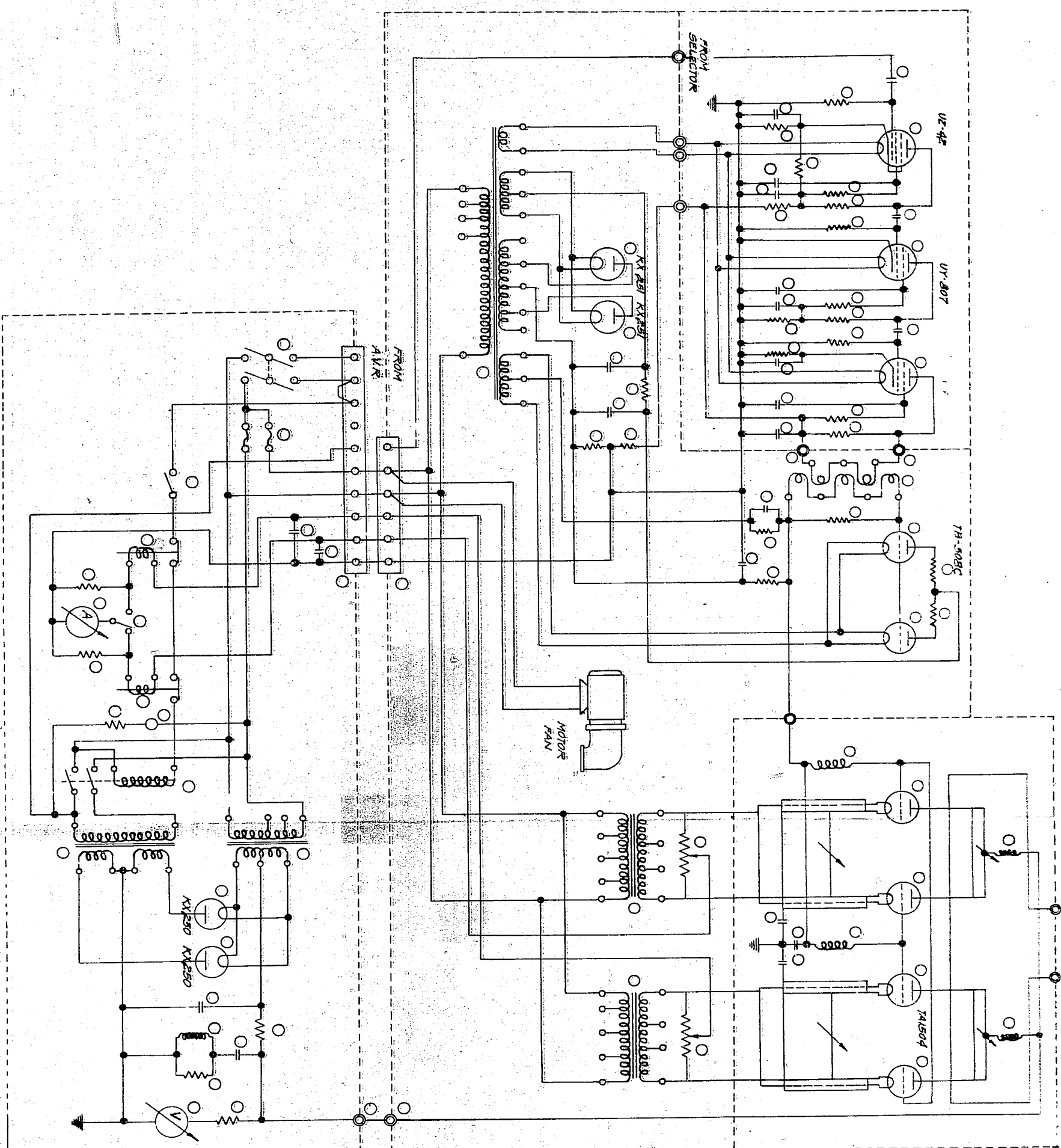


Figure 4(U)

TRANSMITTER

ENCLOSURE (K)
SUMMARY OF JAPANESE RADAR

RESTRICTED

A. AIR-BOAT MODEL														
No.	Name	Image- Annotation	Object	Image- Polynomial	Image- Pillar	Installation	Frequency (Hz)	Height (m)	Total Time (min)	Frequency (Hz)	Installation Details	Installation Value	Installation Frequency	Installation Details
1	Water-1 Model-1-4	14	Long range anti-air warning	1943-3	1943-3	In use	5000 (40)	100	20	250	High-Altitude Anti-Air Warning (HAAW) and Anti-Air Searchlight (AASL)	7-300 x 2	8,300	UH-934
2	Water-1	14	Anti-air warning	1943-11	1943-10	Mounted on the ship	300	100	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
3	Water-1 Model-1-1	11	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
4	Water-1 Model-1-1	11-1	Anti-air warning	1943-11	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
5	Water-1 Model-1-2	11-1	Anti-air warning	1943-3	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
6	Water-1 Model-1-3	11-2	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
7	Water-1 Model-1-4	11-3	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
8	Water-1 Model-1-5	11-4	Anti-air warning	1943-3	1943-10	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
9	Water-1 Model-1-6	11-5	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
10	Water-1 Model-1-7	11-6	Anti-air warning	1943-3	1943-12	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
11	Water-1 Model-1-8	11-6	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
12	Water-1 Model-1-9	11-7	Anti-air warning	1943-3	1943-12	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
13	Water-1 Model-1-10	11-8	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
14	Water-1 Model-1-11	11-9	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
15	Water-1 Model-1-12	11-10	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
16	Water-1 Model-1-13	11-11	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
17	Water-1 Model-1-14	11-12	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
18	Water-1 Model-1-15	11-13	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
19	Water-1 Model-1-16	11-14	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
20	Water-1 Model-1-17	11-15	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
21	Water-1 Model-1-18	11-16	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
22	Water-1 Model-1-19	11-17	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
23	Water-1 Model-1-20	11-18	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
24	Water-1 Model-1-21	11-19	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
25	Water-1 Model-1-22	11-20	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
26	Water-1 Model-1-23	11-21	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
27	Water-1 Model-1-24	11-22	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
28	Water-1 Model-1-25	11-23	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
29	Water-1 Model-1-26	11-24	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
30	Water-1 Model-1-27	11-25	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
31	Water-1 Model-1-28	11-26	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
32	Water-1 Model-1-29	11-27	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
33	Water-1 Model-1-30	11-28	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
34	Water-1 Model-1-31	11-29	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
35	Water-1 Model-1-32	11-30	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
36	Water-1 Model-1-33	11-31	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
37	Water-1 Model-1-34	11-32	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
38	Water-1 Model-1-35	11-33	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
39	Water-1 Model-1-36	11-34	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
40	Water-1 Model-1-37	11-35	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
41	Water-1 Model-1-38	11-36	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
42	Water-1 Model-1-39	11-37	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
43	Water-1 Model-1-40	11-38	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
44	Water-1 Model-1-41	11-39	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
45	Water-1 Model-1-42	11-40	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
46	Water-1 Model-1-43	11-41	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
47	Water-1 Model-1-44	11-42	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
48	Water-1 Model-1-45	11-43	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
49	Water-1 Model-1-46	11-44	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
50	Water-1 Model-1-47	11-45	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
51	Water-1 Model-1-48	11-46	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
52	Water-1 Model-1-49	11-47	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
53	Water-1 Model-1-50	11-48	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
54	Water-1 Model-1-51	11-49	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
55	Water-1 Model-1-52	11-50	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
56	Water-1 Model-1-53	11-51	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
57	Water-1 Model-1-54	11-52	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
58	Water-1 Model-1-55	11-53	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
59	Water-1 Model-1-56	11-54	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
60	Water-1 Model-1-57	11-55	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
61	Water-1 Model-1-58	11-56	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
62	Water-1 Model-1-59	11-57	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
63	Water-1 Model-1-60	11-58	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
64	Water-1 Model-1-61	11-59	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
65	Water-1 Model-1-62	11-60	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
66	Water-1 Model-1-63	11-61	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
67	Water-1 Model-1-64	11-62	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
68	Water-1 Model-1-65	11-63	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
69	Water-1 Model-1-66	11-64	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
70	Water-1 Model-1-67	11-65	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
71	Water-1 Model-1-68	11-66	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
72	Water-1 Model-1-69	11-67	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
73	Water-1 Model-1-70	11-68	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
74	Water-1 Model-1-71	11-69	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
75	Water-1 Model-1-72	11-70	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
76	Water-1 Model-1-73	11-71	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
77	Water-1 Model-1-74	11-72	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
78	Water-1 Model-1-75	11-73	Anti-air warning	1943-3	1943-1	In use	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
79	Water-1 Model-1-76	11-74	Anti-air warning	1943-1	1943-3	Mounted on the ship	1,000 (10)	3	20	1,000	7-300 x 2	7-300 x 2	8,300	UH-934
80	Water-1 Model-1-77	11-75	Anti-air											

[illegible]